# Attachments and Pre-fabricated Castable Components

## CATALOG/TECHNICAL MANUAL

for Dentists and Dental Technicians


13th Edition

World Leader in Dental Attachments

# CLINICAL WORKSHOP

## OVERDENTURE ON NATURAL TEETH IMPLANTOLOGY AND CAD CAM

*The primary goal of the workshop is to learn the best procedures in planning and developing implant supported bars with detailed focus on conservative and radicular prosthesis. Rhein83 wants to support the dentist with innovative working procedures in over-denture and peri-overdenture by analyzing the most modern bar applications and cad-cam procedures.*

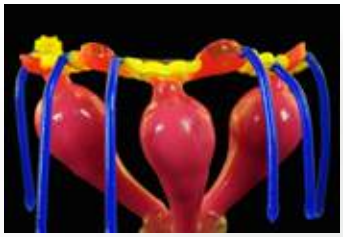
# UNIVERSITY PROGRAMS

## REMOVABLE PROSTHESIS MASTER COURSES, TRADITION AND INNOVATION OF THE RETENTIVE SYSTEMS

*Courses dedicated to universities presenting innovative solutions and procedures in planning the prosthetic projects. Functional, aesthetical and phonetical evaluation of the patient by considering the social conditions and background. Real clinical cases presentation and analysis supported by live working procedures on models with students from universities worldwide. Cultural interchange programs with international universities, post graduate degree programs, international contests and much more!*

## BASIC LEVEL

***Introduction to the Rhein83 techniques in intra-coronal and extra-coronal prosthesis. Innovative procedures allowing to reduce working times and costs by using pre fabricated castable components. Direct overdenture concepts in implantology on all implant brands and platforms.***




## MASTER LEVEL

***Deeper insight into the themes presented during the basic course with special focus on implant prosthesis and new digital cad cam working procedures. Simple and useful solutions in complex implantology clinical cases.***



# RHEIN83 BIRTH, GROWTH AND EVOLUTION

*Metallic spherical attachments exist since many years. But these attachments were not widely accepted, by the dental professionists. Then came the idea to render these mechanisms elastic! A smoothed head and the elastic cap are the result of these innovative changes; today this technique is amongst the most widely used. Rhein83 has been in business since 1983 and today these products have been copied throughout the entire world, copies that in many cases reflect the forms of the objects but not the materials they are made from, and therefore it significantly changes the functional result. Research is not only oriented towards the study of new products, but also continually trying to perfect those that have been used for many years. Dental attachments are small mechanisms subjected to continuous movement, stresses and oral changing, requiring periodic maintenance and revisions. Some products in this have been made for maintaining and restoring the functionality, to all the prostheses, directly while they are in the mouth of the patients. The commitment of Rhein83 with its knowledge and skills continually being enriched by the contributions of dentists and laboratory technicians, is to be able to improve the actual standards and develop new products by means of original projects.*

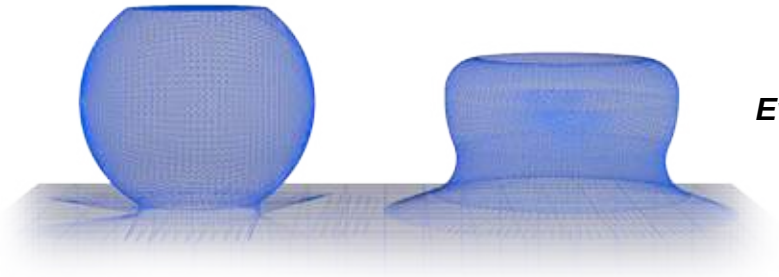
*Ezio Nardi*





## RESEARCH AND INNOVATION TODAY

***By over 34 years Rhein83 is continuously innovating the dental attachments world with materials and designs allowing to satisfy the technical requests of the dental specialists.***

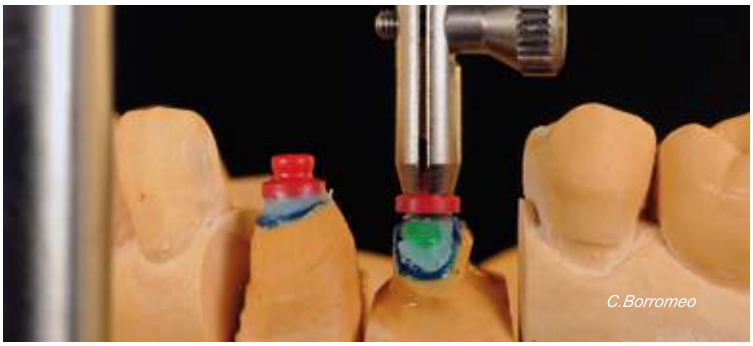


## NEW OT EQUATOR PROFILE

***Evolution from the sphere to the semi-sphere, reduced dimensions allowing the same stability and functionality!***

## TECHNICAL INNOVATIONS AVAILABLE TO ALL!


C.Borromeo


C.Borromeo


Dr.G.Schiatti
C.Borromeo

# GENERAL INDEX

# COMPARISON OF RIGID CAPS vs. ELASTIC CAPS

## Characteristics and retentive functionality

### FRICTION FIT CAPS: RIGID MATERIALS

- ACETALIC PLASTICS
- METALS

(thin layer)

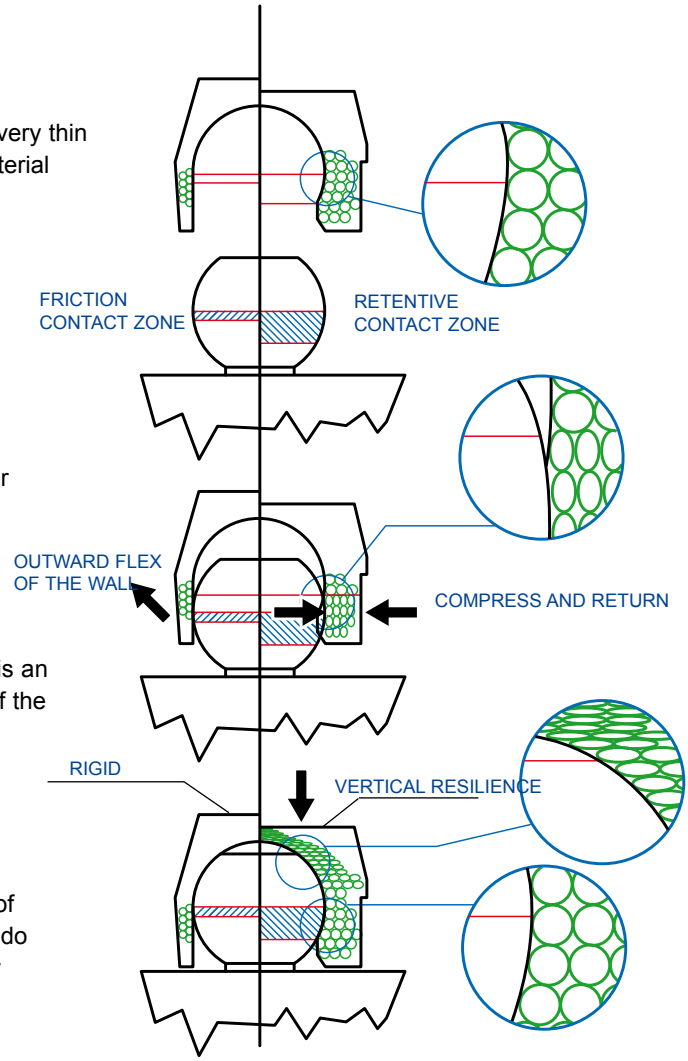
Friction fit contact zone is very thin because of non-elastic material

### RETENTIVE FIT CAPS: ELASTIC MATERIALS

- NYLON

(thick layer)

The elastic materials allow a wide contact zone of retention by the equator on the undercuts of the sphere




### FRICTION CONTACT ZONE

With rigid materials, only minimal friction retention is achieved due to the smaller friction contact zone

### RETENTIVE CONTACT ZONE

With elastic materials, greater friction and mechanical retention is achieved with a higher degree of functionality

### FLEXION OF THE WALL

With rigid materials, there is an “outward flex” of the wall of the cap

### COMPRESS AND RETURN

With elastic materials, the wall of the cap is compressed and then returns to its original shape

### RIGID RESILIENCE

In spite of the flat surface of the sphere, rigid materials do not allow vertical resiliency

### VERTICAL RESILIENCE

The space between the flat surface of the sphere and elastic cap allows for vertical resiliency and reduces stress

## RHEIN83 - DESIGN AND FUNCTION

Rhein83 continues to manufacture female caps with elastic retention with the intention of eliminating as much vertical stress and trauma to the restoration as possible. For Rhein83 the important thing is to make a system of components available to the dental technician and dentist that will allow for the fabrication of a rigid, shock absorbing or resilient prosthesis. With the use of elastic retention, the function of Rhein83 attachments are extended.

With overdenture prosthetic devices or cases involving edentulous saddles, resiliency can be controlled with a wide range of retentive caps that have various levels of elasticity and retention.

Vertical movement

Rigid retention

Movement in all directions

| | | |
|---|---|---|
| CLEAR CAPS<br>STANDARD RETENTION |  | **Slightly Elastic**<br>Maximum suggested time of duration in mouth: 12 months<br>Retention in grams: Normal 1300g / Micro 1100g |
| PINK CAPS<br>SOFT RETENTION |  | **Elastic**<br>Maximum suggested time of duration in mouth: 12 months<br>Retention in grams: Normal from 900g / Micro 800g |
| YELLOW CAPS<br>EXTRA SOFT RETENTION |  | **Very elastic**<br>Maximum suggested time of duration in mouth: 12 months<br>Retention in grams: Normal 500g / Micro 450g |
| GREEN CAPS<br>ELASTIC AND GUMMY |  | **Characteristics** Maximum suggested time of duration in mouth: 12 months<br>Extremely elastic retention, “GUMMY” type. Minimally hydroscopic, with a good adhesion on the sphere.<br>Retention in grams: Normal 350g / Micro 200g |
| EXTRA RESILIENT GOLD CAPS<br>SLIGHTLY ELASTIC |  | **Characteristics** Maximum suggested time of duration in mouth: 12 months<br>To be used in overdenture prostheses, where resilience and vertical movements are necessary.<br>Retention in grams: Normal 500g / Micro 450g |
| EXTRA RESILIENT SILVER CAPS<br>ELASTIC AND GUMMY |  | **Characteristics** Maximum suggested time of duration in mouth: 12 months<br>To be used in overdenture prostheses, where a vertical movement is necessary and a light initial retention is requested.<br>Retention in grams: Normal 350g / Micro 200g |
| PROCESSING CAPS |  | **Characteristics**<br>Caps to be used only for laboratory processing. |
| TITAN CAPS<br>NYLON CAPS WITH INTERNAL TITANIUM RING |  | **Characteristics** Maximum suggested time of duration in mouth: 12 months<br>Extremely durable. To be used especially in combination with pre-fabricated spheres such as titanium spheres, concave spheres, etc.<br>Retention in grams: Normal 1500g / Micro 1300g |
| UNDERSIZED INTERNAL DIAMETER CAPS<br>STANDARD RETENTION |  | **Characteristics** Maximum suggested time of duration in mouth: 12 months<br>Internal diameter reduced (Normal 2.2mm \| Micro 1.6mm), for 2.25mm - 1.6 spheres<br>Retention in grams: Normal 1300g / Micro 1100g |
| UNDERSIZED INTERNAL DIAMETER CAPS<br>SOFT RETENTION |  | **Characteristics** Maximum suggested time of duration in mouth: 12 months<br>Internal diameter reduced (Normal 2.2mm), for 2.25mm spheres<br>Retention in grams: Normal 900g |
| UNDERSIZED INTERNAL DIAMETER CAPS<br>EXTRA SOFT RETENTION |  | **Characteristics** Maximum suggested time of duration in mouth: 12 months<br>Internal diameter reduced (Normal 2.2mm), for 2.25mm spheres<br>Retention in grams: Normal 500g |
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## STAINLESS STEEL AND TITANIUM HOUSING FOR CAPS, PRE-FABRICATED, NORMAL AND MICRO SIZES


The new stainless steel housing design offer reduced size and additional stability, it can be enbodied directly in the resin, welded or bonded to the frame. The new design is also available in titanium.

## EXTRA RESILIENCY FUNCTIONALITY

Extra resilient caps, normo and micro size, will allow to absorb elevate masticatory forces without creating any damage to the implant or root.

# OT EQUATOR CASTABLE
## Single Attachment for Overdentures

OT EQUATOR


OT EQUATOR
CASTABLE MALE ATTACHMENT

RETENTIVE CAPS
OT EQUATOR


STAINLESS STEEL HOUSING


TITANIUM HOUSING


VIOLET CAP
RIGID RETENTION (2.7Kg)


CLEAR CAP
STANDARD RETENTION (1.8Kg)


PINK CAP
SOFT RETENTION (1.2Kg)

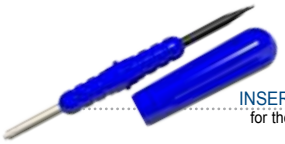

YELLOW CAP
EXTRA-SOFT RETENTION (0.6Kg)


BLACK CAP
PROCESSING

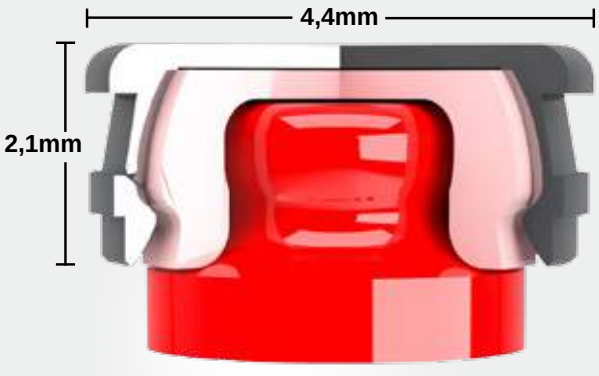

IMPRESSION
TRANSFER
pick-up impression

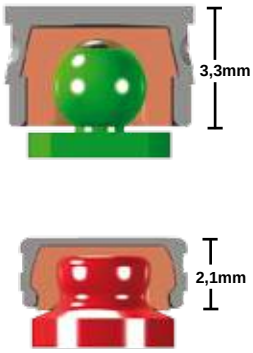

IMPRESSION
TRANSFER
individual tray


STAINLESS STEEL
ANALOG FOR
PLASTER MODEL


OT EQUATOR CAPS
INSERTER/EXTRACTOR TOOL
for the insertion/removal of the caps
into/from the metal housing


PARALLELOMETER
MANDREL




If additional retention is needed to secure the prosthesis, OT Cap Normal retentive caps and metal housings can be placed over any OT Equator Profile spheres. The prosthesis will be retained in the same way and the connection will be more rigid. Only the dimension of the attachment will be changed.

CLINIC

SEVERE DIVERGENCY MAY REQUIRE THE OT EQUATOR IN COMBINATION WITH A CASTABLE UCLA

LABORATORY

## OT EQUATOR CASTABLE = INDIRECT TECHNIQUE

Use separating material on the stone model in the prepared areas to receive the castable posts.

Use longer castable posts in the root channels for easy removal. Reline with castable resin, for higher accuracy.

Place posts and finish margins with composite material. Once resin is cured, cut posts to the required length at root level.


Position OT Equator on the occlusal surface with the paralleling key and continue waxing technique.

OT Equator in the final position. The wax-up has been completed.

For the best results, create the casting with an alloy that has a vickers hardness of 220 or greater.

## BUILD UP THE FRAME DIRECTLY ON MASTER MODEL

The plaster model with the OT Equator analog in position. The stainless steel housing and black processing cap are also visible.

Apply a thin layer (.5mm) of wax to the model. Fill the undercuts on the stainless steel housing and attach the connectors.

Connect the parts using a castable resin. Be sure to cover the stainless steel housing.

Add sprues to the framework and remove it from the model. Be sure that the stainless steel housing does not remain inside. The framework is now ready to be invested.

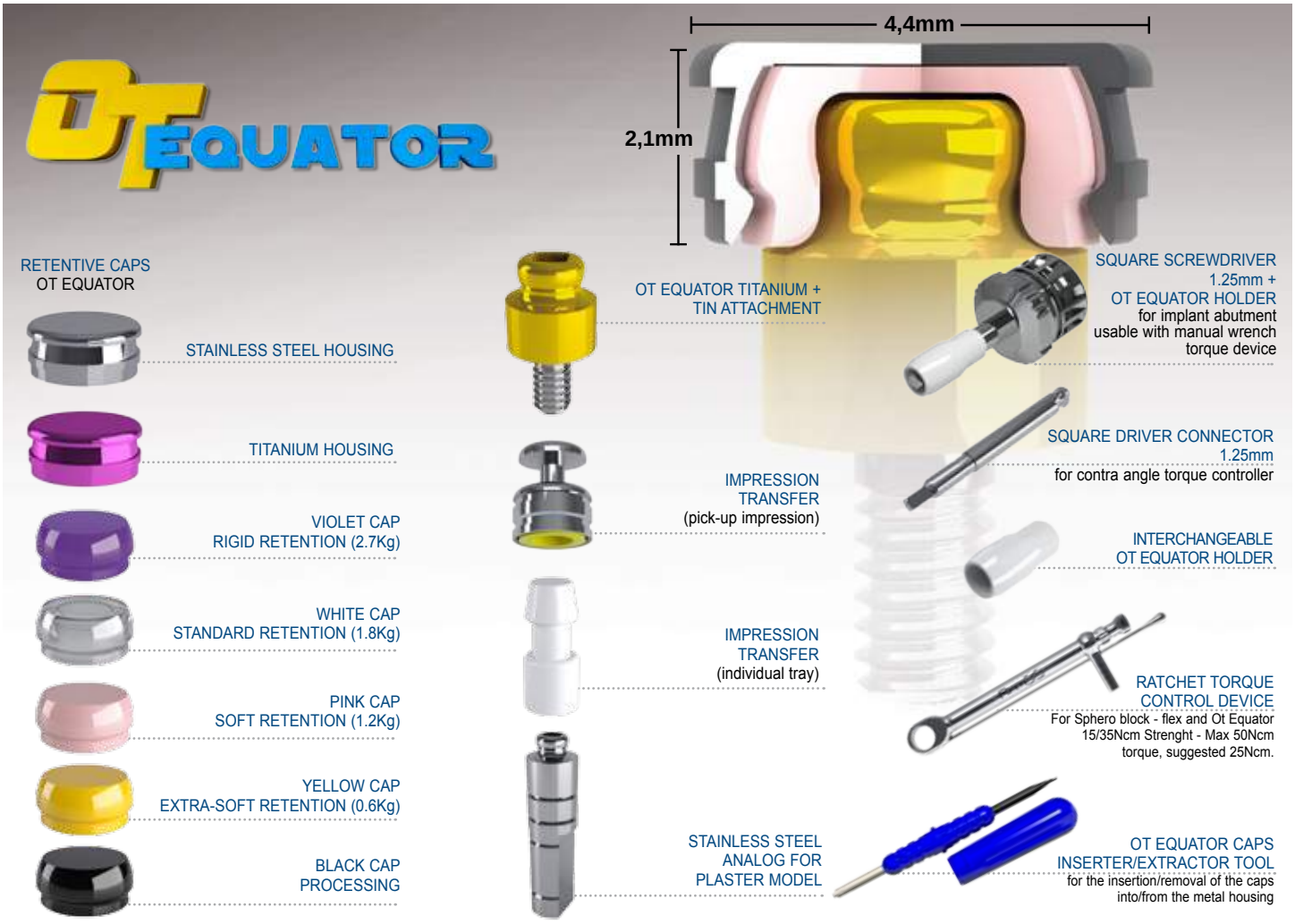
Cast the metal frame and verify the position on the model.

Use composite to bond the stainless steel housing to the frame.

The metal frame with the stainless steel housing in place.

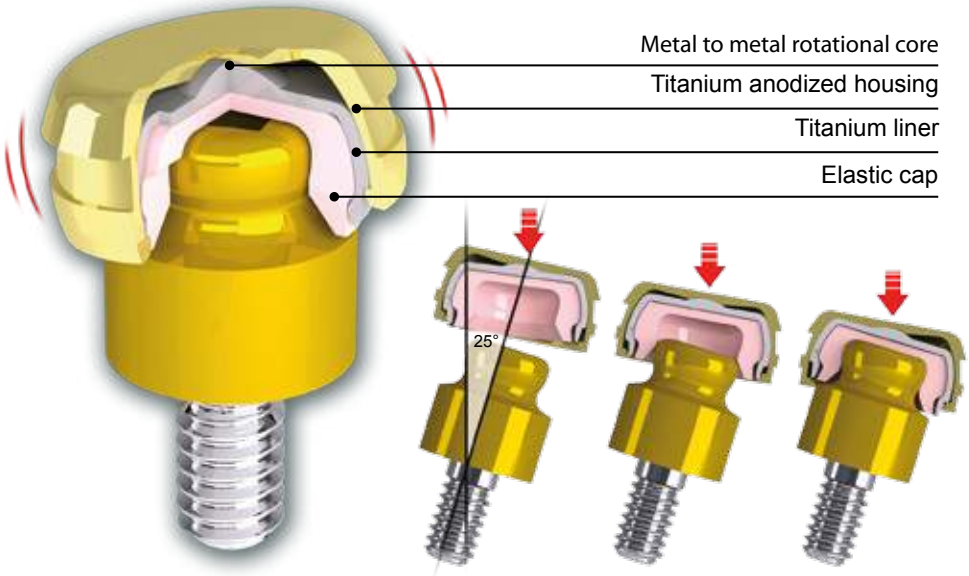
The finished prosthesis on metal frame. After processing, the black caps are replaced with pink caps.

# OT EQUATOR FOR IMPLANTS
## Low Profile Titanium Abutment




The unique design and exceptionally low 2.1mm profile of the OT Equator 4 in 1 System provides exceptional stability and superior retention when compared with other attachment systems. Due to its lower radius, OT Equator is indicated to correct divergence up to 25 degrees between implants without affecting the functionality of the elastic nylon cap. Caps are available in a wide variety of retention levels. ATTENTION; Where implant divergence exceed the maximum 25 degrees, Sphero Block and Sphero Flex are recommended case plan options. See Sphero Block and Sphero Flex page 40-41

## Smart BOX — *the **self-aligning** Ot Equator Housing*





**Passive insertion reduces trauma**

**Correct divergency up to 50°**

CLINIC

## ATTACHING THE CAPS IN CLINIC

Select the OT Equator with the appropriate cuff height. Screw the OT Equator into the implant.

Place the protective disk over the OT Equator. Then, place the stainless steel housing with cap on the attachment.

Verify the positioning of the prosthesis before bonding the stainless steel housing.

On the prosthesis, fill the implant sites with a self curing resin and insert into the patient's mouth.

Remove the prosthesis and verify that the positions of the attachments are correct.

Remove the protective disks.

Carefully trim away the excess resin.

The completed prosthesis.

## IMPRESSION TRANSFER

Place the impression coping on the OT Equator.

Insert the analog into the impression coping and pour the master model.

LABORATORY

## BUILD UP THE FRAME DIRECTLY

(for the full technique go to page 7)

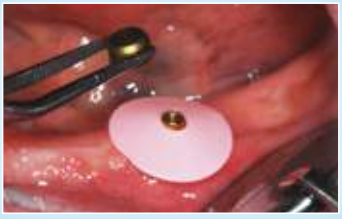
Add sprues to the framework and remove it from the model. Be sure that the stainless steel housing does not remain inside.

The metal frame with stainless steel housings bonded in place.

CLINIC

## CHAIRSIDE PROCEDURE FOR SMARTBOX POSITIONING

Select the OT Equator with the appropriate cuff height. Screw the OT Equator into the implant.



Position the protective disk over the OT Equator.

Fully engage SMARTBOX with Black cap securely onto OT Equator.

Fill the space corresponding to the housings with self curing resin. Insert the prosthesis into the final position.

Once the resin has cured, remove the protective disk.

Remove excess resin with bur and polish for passive connection.

Remove SMARTBOX black cap with cap extractor tool.

Using the cap insertion tool, select 1 of 4 Ot Equator femal caps for desired retention.

# ELASTIC SEEGER
## Passive bar connection

OT EQUATOR

New SEEGER

TITANIUM LOCKING SCREW

SELF-EXTRACTING SEEGER RING

CASTABLE CONTAINER CYLINDER FOR SEEGER RING

OT EQUATOR PROFILE TITANIUM + TIN ATTACHMENT

**OT EQUATOR SEEGER**

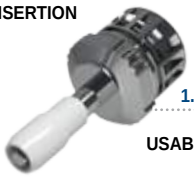
FOR SELF-EXTRACTING PEEK RING OR TITANIUM HEALING RING

**STAINLESS STEEL ANALOG**

FOR PLASTER MODEL

**CAPS EXTRACTOR WITH HOUSING FOR INSERTER**

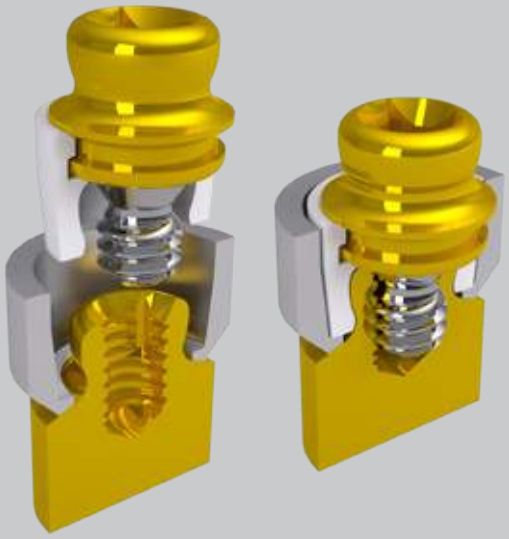
CURVED TOOL FOR SELF-EXTRACTING RING INSERTION



**SQUARE SCREWDRIVER 1.25mm + EQUATOR HOLDER**

FOR IMPLANT ABUTMENT USABLE WITH MANUAL WRENCH TORQUE DEVICE

### OT EQUATOR SEEGER OPTION



The purpose of the OT Equator “seeger” system is to create a passive connection for implant supported bars. The elastic seeger will correct small imperfections created by the chairside impression technique or laboratory casting process. This reduces the risk of the implant bar to not seat passively.

## CLINIC — POSITIONING SYSTEM WITH BAR “ELASTIC SEEGER”

OT Equator titanium attachments screwed into the implants. The elastic seeger system will be used to position the bar.

The cast bar in position. Insert the PEEK elastic seeger ring into the cylindrical space.

Using the insertion tool, push down the PEEK elastic seeger ring until it is fully seated.

PEEK seeger ring in position, ready to screw the titanium locking screw.

After the elastic seeger ring has been inserted, lock the bar into place using the titanium locking screw, (Torque suggested 15 Ncm)

The finished bar secured in the mouth. A passive connection has been achieved due to the elastic PEEK seeger rings.

The completed prosthesis. For best results a reinforced superstructure is always recommended.

In case of a future check, the special internal design of the PEEK seeger ring allow the self extraction together with the titanium locking screw

## LABORATORY — WAX-UP OF THE BAR DIRECTLY ON MODEL MASTER

Screw the OT Equator attachments into the implant analogs.

Position the seeger castable cylinders, followed by the red plastic seeger for laboratory use on the attachments (Thinner part lower). Screw the titanium sealing lid into position. Do not overtighten.

OT EQUATOR castable attachments are placed on the connecting bar creating a “balance” with the removable prosthesis. Alloys with a Vickers Hardness of 240 or greater are recommended for casting.

Connect the castable abutments with wax or resin.

The cast bar in position on the model.

The cast framework in position. Undercuts on the stainless steel housing can be blocked out using composite material to maintain a passive connection.

Fit and stability of the prosthesis can be regulated using nylon caps.Various levels of retention are available.

The final prosthesis.

## LABORATORY — OT EQUATOR SEEGER

Insertion of the Ot Equator seeger inside the self-extracting peek ring already in position.

Like the titanium seeger screw, the Ot Equator seeger also removes the self-extracting peek ring during unscrewing.

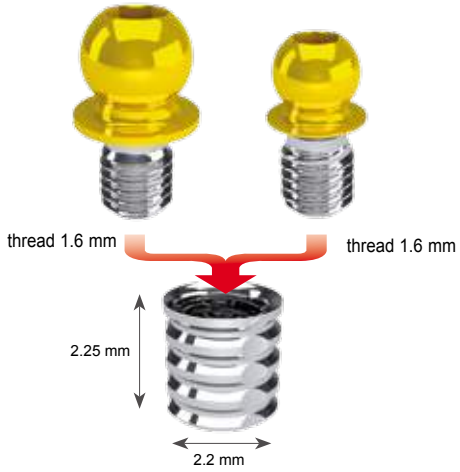
2 threaded Ot Equator for cam and 2 Ot Equator seeger in position, in case of divergence (the Ot Equator seegers follow the direction of the implants) the use of Smart box housings is recommended.

# INTERCHANGEABLE THREADED ATTACHMENTS
## with threaded sleeve system

### OT CAP
NORMAL/MICRO

NORMAL SPHERE
HEX 1.3 mm

MICRO SPHERE
HEX 0.9 mm




THREADED SLEEVE FOR BONDING

OT CAP SLEEVE SPACERS
Normal/Micro

HEX SCREWDRIVER
HEX 0.9 mm

HEX SCREWDRIVER
HEX 1.3 mm

RETENTIVE CAPS
OT CAP

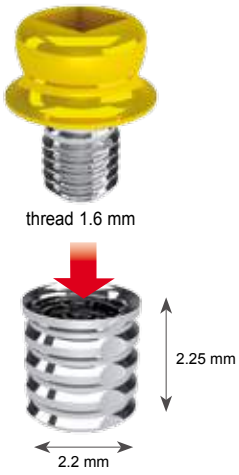
Clear Standard | Pink Soft | Yellow Extra Soft | Green Elastic | Black Processing

S.STEEL HOUSING
OT CAP NORMAL / MICRO

TITANIUM HOUSING
OT CAP NORMAL / MICRO

### OT EQUATOR

OT EQUATOR
SQUARE HEAD




THREADED SLEEVE FOR BONDING

SCREWDRIVER
OT EQUATOR SQUARE
+ INTECHANGEABLE HOLDER

S.STEEL OR TITANIUM HOUSINGS
OT EQUATOR

OT EQUATOR SLEEVE SPACER

RETENTIVE CAPS
OT EQUATOR

Violet Strong | Clear Standard | Pink Soft | Yellow Extra Soft | Black Processing

PARALLELOMETER MANDREL Normal / Micro

OT EQUATOR CAPS INSERTER/EXTRACTOR TOOL
for the insertion/removal of the caps into/from the metal housing

OT CEM COMPOSITE MATERIAL
Metal to Metal Bonding

## OT CAP - OT EQUATOR FOR CAD-CAM MILLED BARS

NORMAL SPHERE

Standard
2 mm Thread

MICRO SPHERE

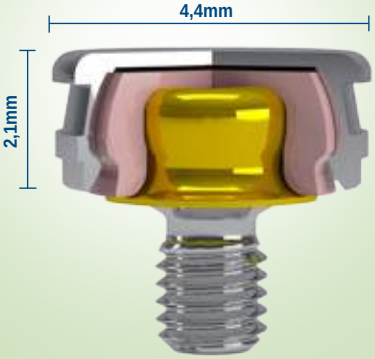
Standard
2 mm Thread

OT EQUATOR

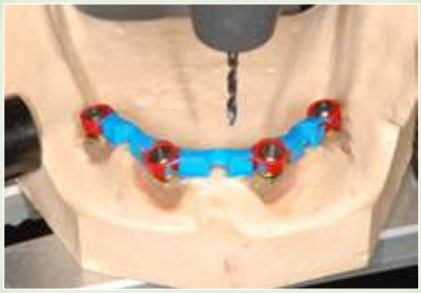
Standard
2 mm Thread

## LABORATORY

### OT EQUATOR



## STEP BY STEP THREADED SLEEVE BONDING PROCEDURE



Once the bar has been connected with wax, create an area where the attachment spacer will be placed.

Apply separator to the base of the attachment spacer and postion using the parallelometer key.

With the attachment spacer in position, complete the wax-up design.

Carefully remove the attachment spacers and proceed with the normal casting procedure.

Screw the threaded attachment of choice (Micro Ball shown) into the threaded sleeve.

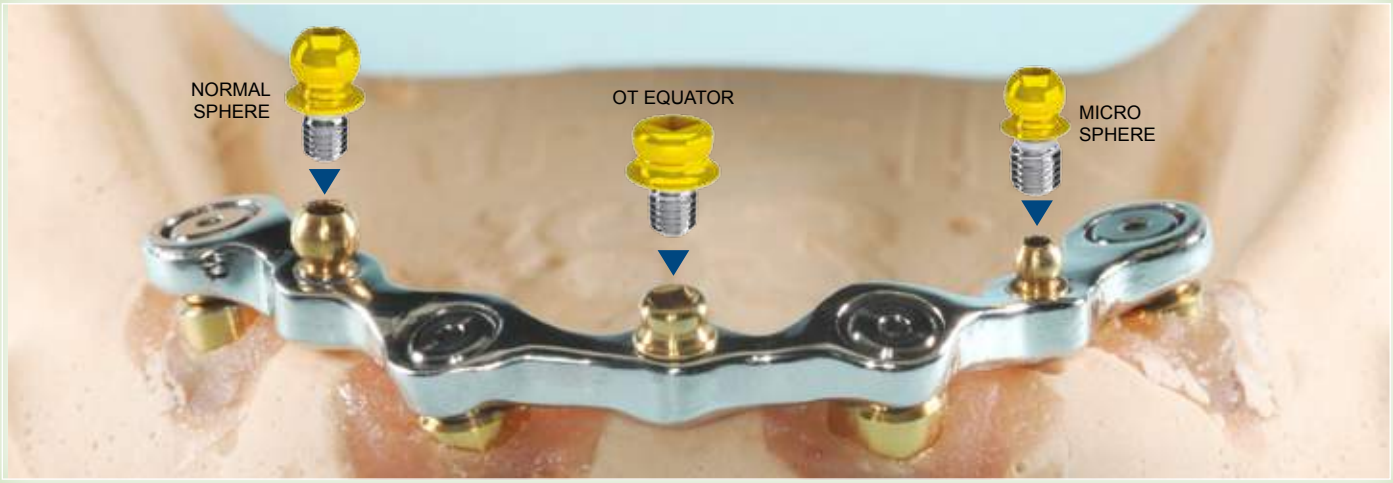
Place the assembled attachment into the parallelometer key. Use a self curing metal to metal bonding composite on the sleeve and in the cylinder.

After the composite is cured, remove any excess material.

Unscrew the attachment to verify if the threaded sleeve is securely bonded in place.

The finished bar complete with attachments.

## 3 ATTACHMENT OPTIONS




THE TECHNIQUE IS THE SAME FOR ALL THREE OPTIONS

# EXTRACORONAL CASTABLE ATTACHMENTS
## OT CAP - OT CAP TECNO

CASTABLE BARS
Normal / Micro

STAINLESS STEEL
AND TITANIUM HOUSINGS
Normal / Micro
for curing, welding or bonding

OT BOX MONO
Normal / Micro

RETENTIVE CAPS
Normal / Micro


TITAN CAP
Normal / Micro

PARALLELOMETER
MANDREL
FOR OT CAP TECNO
Normal and Micro

PARALLELOMETER
MANDREL FOR OT CAP
Normal / Micro

REGULATING TOOL FOR
RETENTION
Normal / Micro

OT EQUATOR CAPS
INSERTER/EXTRACTOR TOOL
for the insertion/removal of the caps
into/from the metal housing

OT Cap is a resilient distal extension attachment. It is indicated to be used with combined prostheses and removable partial dentures.

For treatment plans that require a rigid substructure with milling and adequate counter attachments, OT Cap functions as a stabilizing retentive connector. In addition, for treatment plans which require resiliency, OT Cap provides a “Cushion Effect” similar to a shock absorber. This is achieved by the design of the sphere in conjunction with the elastic retentive caps.

The OT Cap Tecno consists of a titanium sphere and ring that is incorporated into the nylon cap which has been machined with a tolerance that assures high precision. While fabricating the prosthesis, the Tecno titanium sphere is not exposed to any of the risks associated with the laboratory fabrication procedures and ceramic firing cycles.

LABORATORY

### OT CAP TECNO

View of the Ot Techno system, Normo or Micro sphere can be used with the same threaded sleeve.

### OT MONO BOX

OT BOX MONO: The positioning ring to be inserted on the sphere before model duplication.

CLINIC

## OT CAP CASTABLE

Cut the plastic bar and use only the section that you need.

Using the mandrel, position the spheres in parallel. Complete the wax-up with a “ledge” along the crown. The “ledge” must not be lower than the sphere.

The cast crowns. It is suggested to use a retentive cap to protect the sphere from any damage.

The cast attachment. The “ledge” along the crown helps select and redirect the vertical loads.

Using the mandrel, position the Ot Tecno castable extension in parallel, Complete the wax-up with a “ledge” along the crown and cast.

Place the assembled attachment into the parallelometer key. Use a self curing metal to metal bonding composite on the sleeve and in the cylinder.

After the composite is cured, remove any excess material.

Unscrew the attachment to verify the threaded sleeve is securely bonded in place.

## CAST HOUSING WITH DUPLICATED MODELS

The OT Cap positioning ring on the sphere.

The duplicated model in investment.

The OT Mono Box castable housing in position and incorporated into the final wax design.

The final OT Mono Box casting with retentive caps inserted into the housing.

The castable OT MONO BOX reproduces the shape of the housing which incorporates the retentive cap into the framework.
Use the OT CAP insertion tool to place the retentive cap into the housing.

# CASTABLE HOUSING

Customized solution for frames with single castable sphere housing for caps

OT BOX

CASTABLE HOUSING


**HOUSINGS:**

STAINLESS STEEL - TITANIUM

The new stainless steel housing design offer reduced size and additional stability, it can be embodied directly in the resin, welded or bonded to the frame.

The new design is also available in titanium.

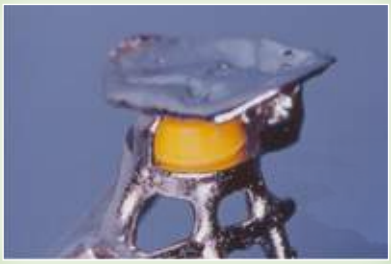
## SIZE FOR RESIN OR SOLDERING


## LABORATORY

When vertical space is limited, use reinforced pins to reduce the risk of breakage of the denture teeth.

### SOLUTION A

Place a piece of .5mm calibrated wax over the wax-up design for additional protection.



The finished casting with retentive cap in place.

### SOLUTION B

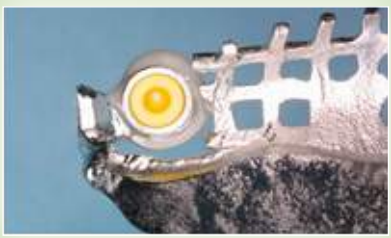
Small wax pins are added for reinforcement of the denture acrylic as well as additional retention for the denture teeth.

The final cast housing with reinforced metal pins.

### STAINLESS STEEL PRE-FABRICATED HOUSINGS

For bonding or soldering to the frame

To obtain the right position use the POSITIONING RINGS.
NORMAL and MICRO sizes are available.



Rhein83 continues to be the world leader in spherical attachments and implant components. Largely due to continuous research and development, active participation in exhibitions as well as providing practical hands-on technical training for dentists and dental laboratory technicians. In addition, the company utilizes state of the art technology to constantly develop new products and improve existing product design as well as promote product awareness.

Rhein83 attachment systems are technically supported in over 75 countries worldwide.






## CERTIFICATIONS

Rhein83 started a “Quality System” path in 1994, obtaining ISO 9001 certification since 1996. In the same year, the company obtained the first product accreditations from the FDA/USA and continued the path with the certifications: 1998-93 / 42 EEC - ISO 9001: 2015 - ISO 13485: 2016. Other conformities and registrations have been obtained in many foreign countries, including: Russia, Canada, Brazil, Korea, etc. The “regulatory” activity is always monitored and constantly updated, for the maintenance of current certifications, their renewal and adaptation to the new rules for medical devices.

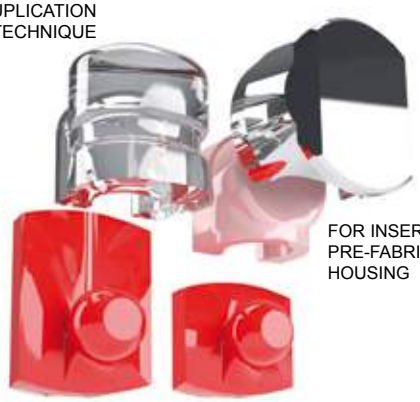
**Claudia Nardi**
Administrator

**Gianni Storni**
Administrator and R&D director

# CASTABLE VERTICAL ATTACHMENT MICRO

OT STRATEGY

FOR DUPLICATION TECHNIQUE



FOR INSERTION INTO THE PRE-FABRICATED HOUSING

CAPS

- Clear • Standard
- Pink • Soft
- Yellow • Extra Soft
- Black • Processing

STANDARD BASE
Sphere Ø 1.8 mm
LONG BASE
Sphere Ø 1.8 mm

ANALOG POST

CAPS

- Clear • Standard
- Pink • Soft
- Yellow • Extra Soft
- Black • Processing

OT STRATEGY CAPS INSERTER/ EXTRACTOR TOOL

STAINLESS STEEL HOUSING
to be welded or bonded to the frame

PARALLELOMETER MANDREL

STRATEGY POSITIONER
for correct positioning of the cap housing on the frame

## PARALLELOMETER KEY PROFILE

SIDE A: For SPHERE positioning
SIDE B: For STEADY positioning

## REINFORCEMENT FOR THE SPHERE

- Increased shear force strength
- Prevents rotation of female cap
- Increased lateral stability

OT Strategy from Rhein83 is a vertical micro-sized 1.8 mm castable sphere that is placed distally on abutments for removable partials or utilized in implant bar combination case design. The male component is designed with an additional support strut located under the sphere, increasing strength and preventing rotation of the female cap during paralleling. The optional Steady, when connected to OT Strategy, provides lateral stability without any additional milling.

OT Strategy caps are available for both duplication and fabrication using a stainless-steel housing technique. Rhein83 caps are manufactured from an elastic material that increases the contact zone with the sphere, giving mechanical and friction retention. Caps are color-coded indicating five levels of retention. Tools for paralleling, inserting, and removing caps are available.

## CLINIC

## LABORATORY

Insert the OT Strategy male into the mandrel and place in position with base of attachment in contact with the stone.

The entire cap must be covered with a thin layer of wax during the frame wax-up procedure.

Once the casting is complete, proceed to use the cap and the prefabricated STAINLESS STEEL HOUSING. The housing can bonded or laser welded to the frame. In addition, it can also be used for direct chairside procedures.

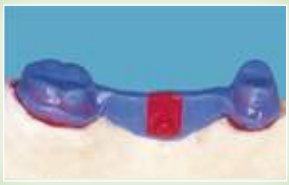
For best results during the DUPLICATION TECHNIQUE, it is suggested to use the YELLOW retentive cap.

## DUPLICATION TECHNIQUE: USING CASTABLE HOUSING

OT Strategy casting is complete with mandatory lingual milling to accept partial bracing arm.

Yellow retentive cap is placed on the sphere and the model is ready for duplication. Use wax to remove any undercuts.

Model is duplicated and the shape of the cap is reproduced.



Insert the black cap into the skeletal cast frame cast partial with the OT Strategy Insertion Tool.

Frame is complete and placed on the model.

Using the insertion tool, insert the cap.

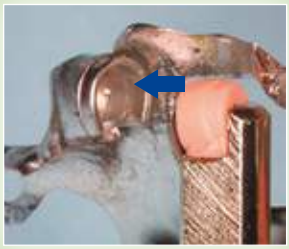
The finished prosthesis.

## WELDING TECHNIQUE: USING PRE-FABRICATED STAINLESS STEEL HOUSING

Crown and OT Strategy attachment cast. Positioning ring and housing.

Positioning ring on the sphere.

Stainless Steel Housing in position on the attachment.



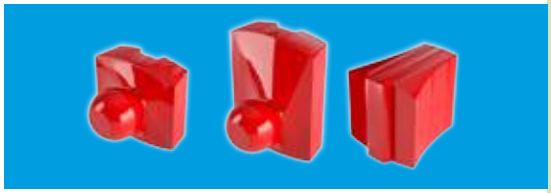
ATTENTION:
Insertion of the cap from the mesial.

Wax-up on the duplicated model.

First Option: Stainless Steel Housing welded to the frame.

Second Option: Stainless Steel Housing bonded to frame with anaerobic self-curing resin.

# CASTABLE VERTICAL MICRO ATTACHMENT STRATEGY + OPTIONAL STEADY

## CLINIC

## LABORATORY

### TECHNIQUE WITH STANDARD **BASE**

Lute the two parts together using an adhesive and insert the sphere into the mandrel of the parallelometer.

The Steady can be used with it's original height or it can be shortened and modified to accommodate the adjacent tooth and ridge.

Finish the wax-up and give the Steady the necessary shape for duplication in the sphere.

The duplicated model.

The frame wax-up.

The finished casting.

### TECHNIQUE WITH LONG **BASE**

Lute the Steady to the Long base. Be sure to position the two parts according to the resorption of the ridge.

Position the attachment as close to the ridge as possible. Fill the space between the Steady and the ridge with wax.

The finished attachment design. The Steady has been adapted to the contour of the ridge.

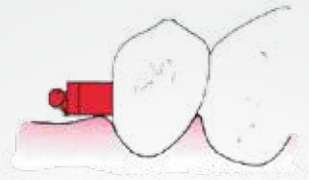
Crown and Steady for duplication and retentive cap on the sphere.

Cast framework seated on the model.

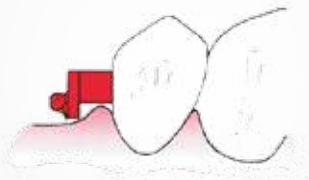
Finished prosthesis.

When the STEADY base is utilized it provides superior lateral support when milling is not indicated.
In the case of free saddles, the STEADY base avoids movement in all directions during mastication.

## Optional = STEADY



Steady + standard base



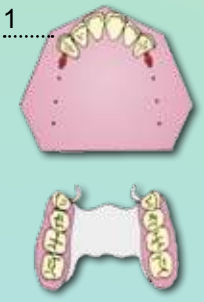
Steady + long base

The castable Steady is an optional conical shaped support intended for use in cases where milling is not performed. Steady can be used with the OT Strategy Standard or Long base.

It is an object in line with the philosophy of the personalization of each single prosthesis and is used
with both the OT Strategy bases; Standard or Long and offer various technical solutions.

CLINIC LABORATORY

OT STRATEGY

1 

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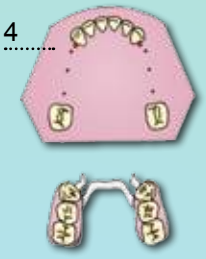
4 

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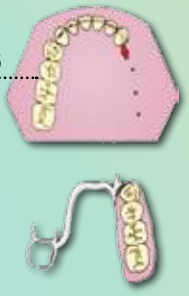
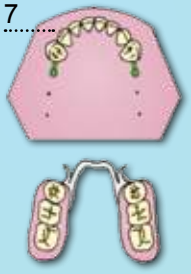
6 

OT CAP

OT CAP LOWER ARCH

OT CAP UPPER ARCH

7 

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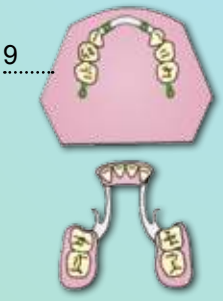
9 

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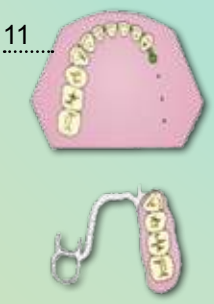
11 

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14 

16 

17 

# SINGLE SPHERES OT CAP

OT CAP

STAINLESS STEEL AND TITANIUM HOUSINGS
Normal / Micro size for curing welding or bonding

Spherical Pivot Line TITANIUM

SINGLE SPHERES TITANIUM + TIN
1600 Vickers Hard
FOR WELDING OR BONDING

## CASTABLE SINGLE SPHERES

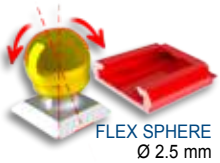
NORMAL
Green
Ø 2.5 mm

MICRO
Red
Ø 1.8 mm

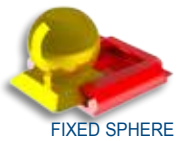
ELASTIC RETENTIVE CAPS
Normal / Micro

- Clear • Standard
- Pink • Soft
- Yellow • Extra Soft
- Green • Elastic
- Black • Processing

Undersized caps for worn or damaged spheres are also available. They are also compatible with 1.7mm and 2.2mm spheres.
See parts list for item codes and descriptions.



FLEX SPHERE
Ø 2.5 mm



FIXED SPHERE
NORMAL SIZE
Ø 2.5 mm

FIXED SPHERE
MICRO SIZE
Ø 1.8 mm

IMPRESSION COPING
Normal / Micro

PLASTIC PIVOTS
for impression of the root canals

Normal

Micro

CASTABLE SLIDING BASE

PIVOT ANALOGS
Normal / Micro

MOOSER BURS

PROTECTIVE DISKS

PARALLELOMETER MANDREL
Normal/Micro size

OT EQUATOR CAPS INSERTER/EXTRACTOR TOOL
for the insertion/removal of the caps into/from the metal housing

The design of the sphere with a FLAT head in addition to the spherical inner surface of the elastic cap, permits vertical movement during mastication. Rhein83 female caps are manufactured out of a special nylon material that remains stable and continues to function in the oral cavity over long periods of time.

Clinical data is available showing that stability is obtained with a minimal amount of trauma.

## CLINIC

### TRANSFER IMPRESSION TECHNIQUE

Put the impression coping on the sphere in the patient's mouth. Different levels of retention are available depending on the color of the cap used.

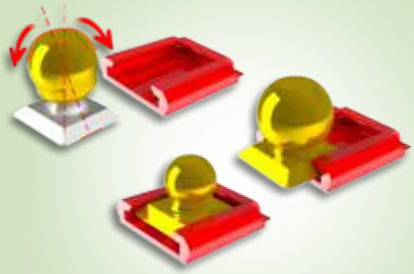
Impression coping in position, the external profile ensures a stable position in the impression.

Insert analogs into the impression copings and pour the model.

Stone model with analogs in place.

## LABORATORY

ATTENTION:
These attachments can be cast with all types of alloys, but it is important to use a metal with a high Vikers hardness in order to avoid the risk of wearing the spheres.



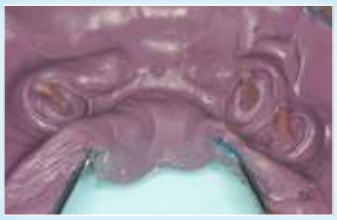
NEW DESIGN

EASY FIT

## IMPRESSION OF ROOT CANALS

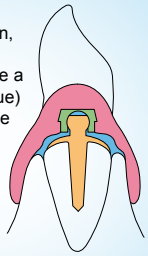
Prepare the roots.


Apply adhesive to the post.



Impression with elastomer.

ATTENTION:
To obtain proper function, it is important to mill the resin with a bur to create a space (highlighted in blue) between the root and the prosthesis.



## OT CAP - EMBODING STAINLESS STEEL HOUSING TO DENTURE

Protective discs on the cast metal spheres.

Fill the space corresponding to the housings with self curing resin. Insert the prosthesis into the final position.

Once the resin has cured, remove the disc and trim the excess material around the housing.

Finished prosthesis.

## OT CAP - CASTABLE SINGLE SPHERE TECHNIQUE

Insert the castable plastic post into the prepared root cavity.

Cut the post to the level of the root and remove the sphere.

Position the single spheres in parallel with each other.

Cast post and sphere. It is also possible to place the sphere off center in respect to the long axis of the post.

## OT CAP - TITANIUM SINGLE SPHERES + TIN FOR CURING WELDING OR BONDING

Wax-up the root cap. Insert the titanium sphere into sliding base and position it on the root cap.

Wax-up with titanium sphere in position. Do not cover the “open” side of the base with wax.

Remove the titanium sphere from the base before attaching sprue.

The finished wax-up with sprue. The root cap and post is ready to be invested.

Using the tool, check the fit of the cast cap by inserting the sphere into the base.

Titanium sphere inserted in the cast root cap base.

Bond the titanium sphere to the base using anaerobic or self curing composite material.

Finished root cap. The sphere is bonded and locked in position.

# PIVOTS FOR DIRECT OVERDENTURE

PIVOT FLEX
TITANIUM +TIN
1600 Vickers Hard
"self-paralleling" sphere

STAINLESS STEEL AND
TITANIUM HOUSINGS
Normal / Micro size curing
welding or bonding

ELASTIC RETENTIVE CAPS
Normal / Micro


SUPER-RESILIENT CAPS


TITANIUM
PIVOT BLOCK
(Ø 2,5 mm/Ø 1,8 mm)

LOW PROFILE
TITANIUM + TIN PIVOT
(over 1600 Vickers)


PIVOT FLEX
TITANIUM + TIN
Ø 2.5 mm 3 lengths

PIVOT BLOCK
TITANIUM WITH STATIONARY SPHERE
NORMAL Sphere
Ø 2.5 mm 3 lengths

PIVOT BLOCK
TITANIUM WITH STATIONARY SPHERE
MICRO Sphere
Ø 1.8 mm 3 lengths

OT EQUATOR PIVOT
LOW PROFILE TITANIUM PIVOT
3 lengths: 10,9,7mm

MOOSER BURS

PROTECTIVE
DISKS

The Pivot Flex line of titanium posts was developed as an economical solution for direct "in root" supported overdentures. The self-aligning Pivot Flex post features a rotating ball with a 2.5 mm diameter and is indicated for divergent roots. When the posts are used with directional rings to align retentive caps before the resin curing stage, the insertion of the denture is easy and trauma-free. The Pivot Block line of milled titanium posts has a stationary ball and can be used for a temporary or as a permanent solution. The Pivot Block titanium posts are available in 2.5 mm and 1.8 mm sphere diameters. The Rhein83 elastic caps ensure optimal retention and function while minimizing wear. There are five levels of retentive caps, including extra resilient caps for precarious root situations. The levels of retention are identified by different colored caps.

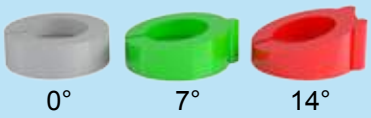
CLINIC

## DIRECTIONAL RINGS - FOR FIXED AND ROTATING SPHERES

Pivot Flex posts in divergent roots.

Nylon caps without directional rings. Caps are not supported in the same horizontal plane.

Nylon caps with directional rings. Caps are now supported in the same horizontal plane.



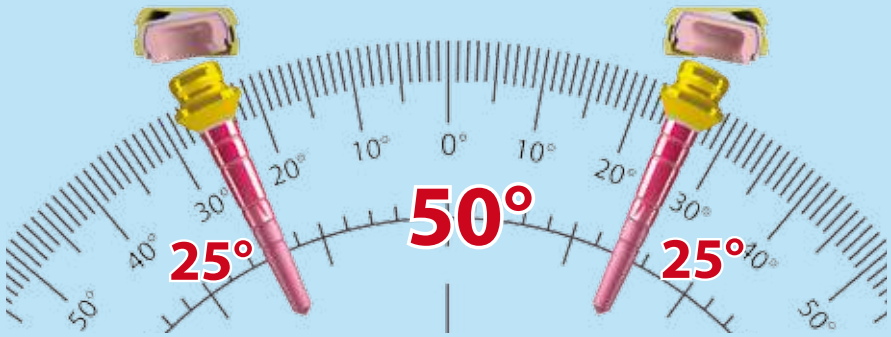

## PIVOT BLOCK - FOR TEMPORARY OR PERMANENT ECONOMICAL SOLUTIONS

Pivot Block cemented with oxyphosphate cement for a temporary solution.

To remove the post from the root, grasp the sphere with the pliers and rotate carefully in both directions.

Due to the conical shape and smooth surface, the post is removed easily.

For permanent solutions, create notches in the post and roughen the surface before cementation.


Thanks to the use of the **OT Equator Smartbox** housing, it's possible to correct divergency up to 50 degrees.

## TITANIUM PIVOT BLOCK AND OT EQUATOR: PERMANENT FIXATION IN THE PATIENT'S MOUTH

Prepare the root by the mucosal level and adjust the radicular cavity by using a Mooser Bur with the proper dimensions.

Fill-up the radicular cavities with proper composite cements, insert than the spherical titanium pivots.

Cemented micro block pivot in position, retentive notches were applied to support the permanents fixation.

Place the directional rings in position between the roots and retentive caps. Proceed by taking the imprint.

Alginate impression: attachment placements in evidence.

Place the protective disks between the directional rings and the retentive caps. Feel with self curing resin and than place the prosthesis in the patient's mouth.

When the resin will be hard enough remove the protective disk and clean up any excess of resin.

Completed prosthesis.

# CASTABLE BAR CAP HOUSINGS

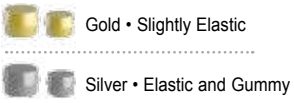
OT Classic BOX + CONNECTOR

CLASSIC BARS
NORMAL- Green + Yellow
MICRO - Red + Yellow

CONNECTOR
Universal castable bar for joining the OT BOX housings

ELASTIC RETENTIVE CAPS
Normal / Micro size


EXTRA-RESILIENT CAPS




IMPRESSION COPING
Normal / Micro

OT Special BOX + CONNECTOR

SPECIAL BARS
NORMAL - Green
MICRO - Red

ANALOGS
Normal / Micro

## CLINIC

Cast reinforcement wax-up on the master model without duplication.

## LABORATORY

## OVERSIZED CASTABLE HOUSING
for repositioning the caps directly in the patient's mouth

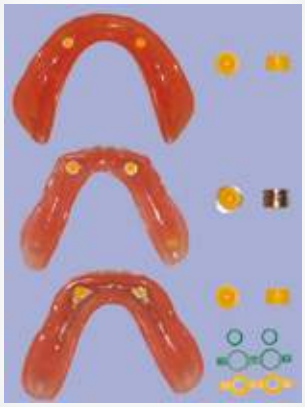
OT BOX LARGE

NORMAL + CONNECTOR

OT BOX LARGE

MICRO + CONNECTOR

The OT Box Large casting compensates for the distance between the cap and the housing. It is manufactured to reposition the cap charside into the frame.



A fracture is more likely to occur where the overdenture attachments are inserted in a prosthesis fabricated entirely of resin. With a cast superstructure reinforcement, the denture will be less likely to fracture. Fast and simple, the OT Box bar components are used to fabricate the superstructure directly on the master model, eliminating duplication and saving time. A non-precious or chrome cobalt alloy is recommended for best results.

It is recommended that all nylon caps are inserted into a stainless steel housing or cast reinforced frame. The stainless steel housing offers a considerable advantage when the cap has to be removed and replaced for routine maintenance or repositioned. Adjustments or repairs can be performed chairside quickly and easily.

Option 1: OT CAP
OT Cap cured directly into the prosthesis.

Option 2: OT Cap + Stainless Steel Housing
OT Cap with housing cured directly into the prosthesis or bonded into frame.

Option 3: OT Cap + OT Box
OT Cap inserted into OT Box cast reinforced frame.

### LABORATORY REQUIREMENTS FOR THE MASTER MODEL

When a new denture is being fabricated utilizing existing spheres, the dentist must provide the laboratory with an impression using the YELLOW CAP. The laboratory will place the analog into the cap and pour the stone model.

## IMPRESSION WITH POSTS FIXED IN THE MOUTH

Titanium posts cemented into the root.

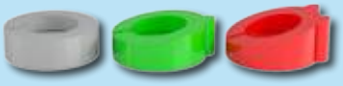
Before taking the imprint place the transfert over the spheres supported by the proper directional ring.

Insert analogs into the impression copings and pour the model.

Stone model with analogs in place.

Plaster model with metal-fused components.

*directional rings




OT Box Classic + CONNECTOR

OT Box Special + CONNECTOR

## DIRECT WAX-UP ON THE MASTER MODEL

OT Box Classic. Glue the two OT Box bars together.

Separate the housing from the OT Box bar connector.

### "ONE-PIECE" MONO BAR

OT BOX SPECIAL is a "one-piece" mono bar. Separate the bar and use only the section needed.

Apply a layer of wax on the ridge. Create three holes in contact with the stone model. Place the positioning rings over the spheres. Be sure to place the ring with the "flared" end towards the coping.

Position the OT Box Classic or Special housings over the rings. Complete the reinforcement using the connectors and join the pieces together with self-polymerising resin.

Finished wax-up with sprue; ready to be invested.

Finished casting with black retentive caps in housing.

Complete prosthesis with cast reinforcement.

For additional reinforcement...with the silicon mask in position, insert a wax pin to support each tooth before casting.

## ROOT TITANIUM + TiN ATTACHMENT

STAINLESS STEEL AND TITANIUM HOUSINGS

ABUTMENT TRANSFER COPING



MANUAL TOOL

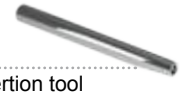
ANALOG FOR ROOTS

MALE RETENTIVE ø 1.8 mm

CAPS EXTRACTOR WITH HOUSING FOR INSERTION TOOL

PROTECTIVE DISK

CONNECTION ROOT PIVOT TITANIUM + TIN



Male insertion tool
OT REVERSE 3

DIAMOND SIZING BUR
For root preparation

## PROSTHESIS WITH REINFORCEMENT IN CAST METAL

POSITIONER FOR DUPLICATION

STAINLESS STEEL AND TITANIUM HOUSINGS

CONNECTORS

ANALOG FOR ROOTS

MANUAL TOOL

ANALOG FOR MODEL

OT BOX LARGE

OT BOX SPECIAL

OT BOX CLASSIC

OT REVERSE 3 is a root supported direct pivot attachment system which provides retention and stabillity for full dentures. The “split” male portion of the attachment is manufactured from titanium that is embedded into a soft nylon material. The female pivots have a unique shape that is designed to fit most remaining root structures. OT REVERSE 3 is successful even with minimal bone support of the remaining dentition. The system is cost effective with simple laboratory and chairside procedures.

### CLINIC

Ref. 034 PRK - PACK:
N. 2 Root Pivots in Titanium+TiN
N. 2 Retentive Males in Titanium + NYLON
N. 2 Plastic Hand Tools
N. 2 Stainless Steel Container
N. 2 Protective Disks

### LABORATORY

## ROOT PREPARATION AND IMPRESSION


Use the diamond sizing bur to prepare the root for the attachment. Using the hand tool, insert the plastic pivot and apply cement.

Pivots cemented into the roots. Insert the male transfer coping into the pivot and take the impression. For best results, use a stiff bodied impression material.

The laboratory will place the analog and pour the stone model.

The stone model with the OT REVERSE 3 analog in position.

## CHAIRSIDE PROCEDURES

If you are using the plastic retentive male, remove the stem.
Caution: If the prosthesis is inserted incorrectly, it could bend and it will not fit into the female housing.

Place the attachment with self-curing resin. It is important to always use the protective disk around the perimeter of the attachment.

When OT Box Large is used, enlarge the space using a carbide bur to reduce interference with the male.

Fill the spaces with self-curing resin. Insert the prosthesis into the patient's mouth and have them bite down until the resin has cured.

Remove the prostheses and trim the excess resin.

## FABRICATION OF FRAME FOR DIRECT ROOTS OR IMPLANTS


OT BOX CLASSIC
Glue the two OT Box sections together.

OT BOX CLASSIC
Separate the two housings and trim any excess material. Use only the part that is needed.

OT BOX SPECIAL
Separate the two housings and use only the part that is needed.

OT BOX LARGE
Separate the two housings and use only the part that is needed.

OT REVERSE 3
Stone model with analogs, denture setup and silicon guide.

Insert positioners in the analogs. Apply wax on the gingival crest. Make holes in the wax in contact with the stone. Be sure to use stone separator.

Position the sectioned OT Box housing of choice. Complete the reinforcement by using the castable connectors.

Join all of the components with self-curing resin.With the silicon mask in place, insert a wax pin for each tooth for additional support.

Remove the OT Box frame from model. Fill in any voids with wax.

Sandblasted
Cast Reinforcement

White or pink opaque can be used to block out the metal frame.

The finished prosthesis. Attachments are inserted into the cast housings.

The finished prosthesis on the stone model.

# RECONSTRUCTIVE SPHERES - OT EQUATOR

## Titanium + TiN coating

Concave RECONSTRUCTIVE Sphere

OT EQUATOR

**MULTIUSE**

**TITANIUM +**
**TiN COATING**
more than 1600 Vickers

**Available for any implant system on the market!**

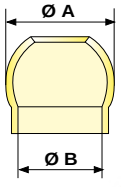
***Ø1,8*** ***Ø2,2*** ***Ø2,5*** ***OT Equator***

**CONCAVE SPHERE**
3 Sizes available:

| Ø A | Ø B |
|---|---|
| 2,5 mm | 1,9 mm |
| 2,2 mm | 1,55 mm |
| 1,8 mm | 1,4 mm |

**OT EQUATOR**
Size:

| Ø A | Ø B |
|---|---|
| 2,5 mm | 2,1 mm |





A - Sphere support
B - Sphere holder
C - Strip holder
D - Spatula for applying cement inside of the sphere.

For existing cases with worn spherical attachments which no longer provide adequate retention, the DR8 UNDERSIZED CAP can be used in the early stages of wear of the male component. This elastic cap offers an inner dimension of 1.7 mm and 2.2 mm which is smaller than Rhein83 normal and micro size caps and can be used with standard Rhein83 stainless steel housings.

When ball attachments show excessive wear, the CONCAVE RECONSTRUCTIVE SPHERES are recommended as the best long term restorative option. The CONCAVE RECONSTRUCTIVE SPHERES restore the worn male to it's original size of 1.8 mm, 2.2 mm or 2.5 mm diameter. CONCAVE RECONSTRUCTIVE SPHERES are manufactured with a Titanium Nitrite coating and are rated over 1600 Vickers hard.

The chairside procedure for using the reconstructive spheres is fast, easy and provides an economical alternative to replacing the old restoration.

Aqua caps are shown

DR8 Undersized Caps are available in 3 levels of retention for normal and 2 levels of retention for the micro size.

## CLINIC

Dental attachments, like most other mechanisms, are subject to wear out. Rhein83 produces spheres for restoring worn ball attachments which restore and stabalize the prosthesis in a single appointment. Reconstructive spheres are bonded over the worn ball restoring the attachment to it's original size.

### CONCAVE RECONSTRUCTIVE SPHERE RESTORING A WORN OUT SPHERE

Insert the concave sphere into side A of the plastic tool. Fit over the worn out sphere in the mouth.

If the concave sphere does not fit passively, use a cylindrical bur (diamond or carbide) to slightly reduce the diameter. Check the fit again and repeat as needed.


Check the position of the concave sphere on the worn out sphere and finish by cleaning the two parts.

Additional surface can be removed by using side C of the tool. Insert a diamond strip into the notches, place the tool over the sphere and turn the manually.


Place a small amount of two-part self curing "metal to metal" resin inside the sphere.


Place the concave sphere over the worn sphere and wait for the resin to cure.

Once the resin has cured, remove any excess material.

The completed repair. The cap can be repositioned if necessary.

Rhein83 offers two types of reconstructive spheres; A solid sphere and a concave sphere. Both types are titanium nitrate coated with a Vickers hardness rated over 1600. The Concave Reconstructive Spheres are available in 1.8 mm, 2.2 mm and 2.5 mm ball diameter. The Solid Reconstructive Spheres are only available with a 1.8 mm ball diameter. The Concave Sphere is used for restoring worn ball attachments and the Solid Sphere is used for restoring ERA ® and CEKA ® type attachments.

## SOLID RECONSTRUCTIVE SPHERE RESTORING A WORN OUT RING ATTACHMENT

The worn-out female ring attachment.

Apply a small amount of two-part self curing "metal to metal" resin on the bottom of the sphere. Insert the sphere into the attachment using the tool. Wait for the resin to cure.

The female attachment was converted into a male OT Cap Micro directly in the patient's mouth.

## SOLID RECONSTRUCTIVE SPHERE RESTORING A WORN OUT OVERDENTURE BAR

Create a hole in the wall of the bar using a 1.6 mm ball drill.

Apply a two part composite to the shank of the sphere. Using the tool, insert the sphere into the hole. Wait for the composite to cure.

The sphere firmly cemented in place. The OT Strategy Cap can now be used in the prosthesis resulting in stability and retention.

## SOLID RECONSTRUCTIVE SPHERE RECOVERY OF TITANIUM ABUTMENTS

A case with unknown titanium abutments. Worn out openings are present on top of the fixtures.

Solid Reconstructive Spheres are placed into the openings. A two-part self curing "metal to metal" resin is applied.

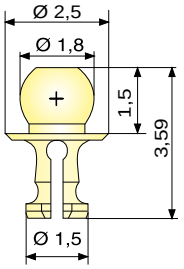
Retentive caps are positioned into the existing denture. The denture is now stable and secure.

# Solid RECONSTRUCTIVE Sphere

## MULTIUSE

SOLID
"RECONSTRUCTIVE"
TITANIUM +
TIN COATING
rated over 1600 Vickers

TO REBUILD ANY
"RING" TYPE
ATTACHMENT
SUCH AS: ERA ® AND
CEKA ®




SOLID SPHERE
Micro Ø 1.8 mm

TOOL
to hold the
sphere

**OT CEM** is a self and photo curing cement. It is designed for permanent metal to metal bonding in the use of attachments in prosthetic implant solutions. Recommended for the following products:

- OT CAP TECNO
- CONCAVE SPHERE
- SOLID SPHERE
- COPING COVER
- THREADED SPHERICAL ATTACHMENTS WITH THREADED SLEEVES

The SOLID RECONSTRUCTIVE SPHERES can be bonded to the inside of hollow attachments or those with a female ring such as ERA ® and CEKA ®

Reconstructive Spheres can be used to repair various attachments available on the market. These attachments can be found in many types of prosthesis including overdentures, implants, roots and frameworks. If worn out or broken, they cannot be repaired easily.

The SOLID RECONSTRUCTIVE SPHERES offer a fast and easy cost effective alternative, transforming a female ring attachment into a male Micro OT CAP attachment. This repair can be completed chairside in a single appointment.

# BAR AND CAST OVERSTRUCTURE
## on the master model without duplication

OT Multiuse BAR
+ CONNECTOR

A

CASTABLE BAR
version **A**

GINGIVAL
CONNECTOR
OPTIONAL

B

CASTABLE BAR
version **B**

CONNECTOR
Universal castable bar for joining the CASTABLE BOX housings

POSITIONING
CLIP A

POSITIONING
CLIP B

CASTABLE BOX

RETENTIVE
YELLOW CLIP
MEDIUM RETENTION 1,8KG

RETENTIVE
PINK CLIP
SOFT RETENTION 1,2KG

RETENTIVE
RED CLIP
EXTRA SOFT RETENTION
0,6KG

PARALLELOMETER
MANDREL

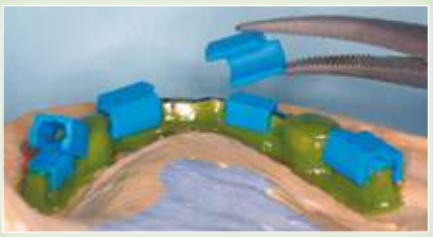
OT BAR CLIPS
INSERTER/EXTRACTOR TOOL

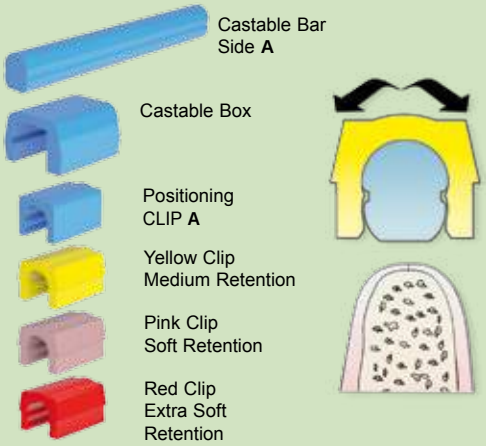
The OT BAR MULTIUSE is designed with a 4 point retentive system.This unique system provides superior retention and can be utilized for both rigid and resilient functionality. With it's innovative two-sided design (Side A is rounded and Side B side is flat), depending on the indication, either side can be used. If a resilient solution is required the bar is positioned with the flat side facing up or if a rigid solution is required then the bar is positioned with the round side facing up. OT BAR MULTIUSE can also be used as a connecting bar between canines in the anterior region.

OT BAR MULTIUSE and the cast housing are fabricated directly on the master model saving time by eliminating the need for duplication.

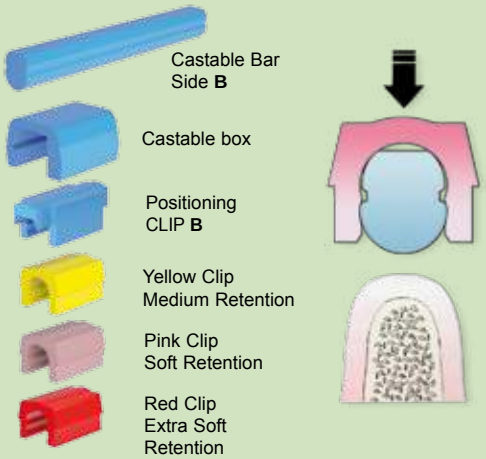
## CLINIC

## LABORATORY






**SIDE A**
The rigid bar is used as a "connection" between two stable teeth where a "back and forth" motion is required. The bar can also be used in scenarios involving multiple abutments where the prosthesis is supported by a thin layer of soft tissue.




**SIDE B**
The resilient bar is most often used in scenarios involving multuple abutments where the prosthesis is supported by a "normal" layer of soft tissue.






## FABRICATION OF THE SUPERSTRUCTURE ON THE MASTER MODEL WITHOUT DUPLICATION

### SIDE A - RIGID


Mount the bar using Side A of the mandrel. Using resin or wax, complete the model.


The finished casting. Be careful not to wear out the retentive surfaces when polishing.


Block out any undercuts using wax and place Positioning Clips A on the bar.


To isolate, apply a small piece of tape (ex: teflon, Scotch) on the Positioning Clips A and on the cast bar. Insert the castable box housings.


To prevent resin from adhering to the bar, place a small piece of adhesive tape (ex: teflon, Scotch tape) over the bar. Use self-curing resin to connect the castable boxes.


Complete the model using wax and add castable connectors for extra reinforcement of acrylic. Sprue the model and cast.

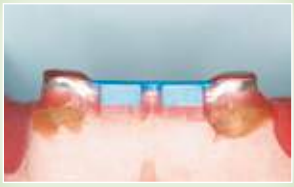

The completed casting with retentive clips snapped in place.


The finished denture with cast reinforcment and retentive clips in place.

### SIDE B - RESILIENT


Mount the bar using Side B of the mandrel. Using resin or wax, complete the model.


The completed casting. Use caution when polishing the surface. Be sure not to wear out the retentive undercuts.


Use wax to remove all undercuts. Apply a thin layer of wax on the top of the bar to create a cushion. Insert Positioning Clips B.


To isolate, apply a small piece of tape (ex: teflon, Scotch) on the Positioning Clips B and on the cast bar. Insert the castable box housings.


To prevent resin from adhering to the bar, place a small piece of adhesive tape (ex: teflon, Scotch tape) over the bar. Use self-curing resin to connect the castable boxes.


Complete the model using wax and add castable connectors for extra reinforcement of acrylic. Sprue the model and cast.

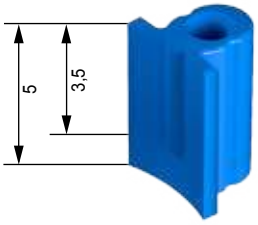

The completed casting with retentive clips snapped in place.


The finished denture with cast reinforcment and retentive clips in place.

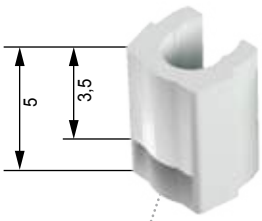
OT VERTICAL

## CASTABLE TWIN CYLINDER ATTACHMENT

with centering and balancing pin

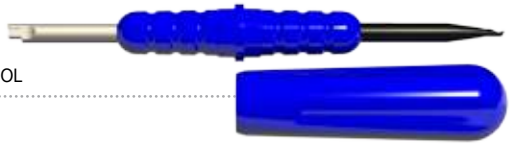



OPTIONAL STEADY




WHITE CLIP
Standard Retention

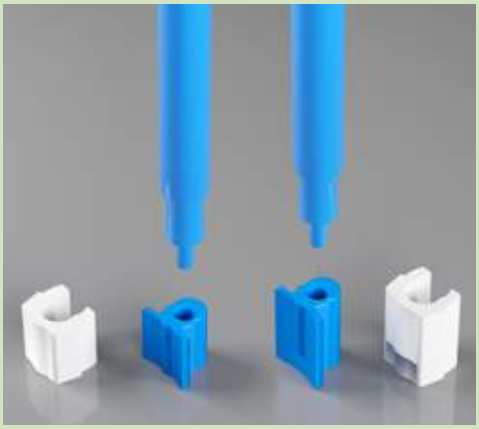
GREEN CLIP
Soft Retention

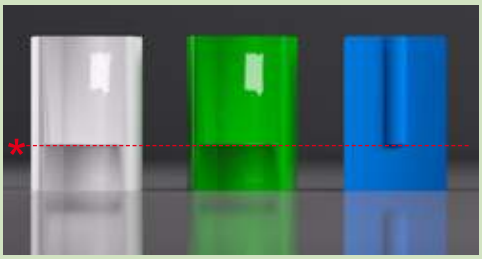


OT VERTICAL CLIPS
INSERTER/EXTRACTOR TOOL


The cast metal guide pin is necessary to center, connect and balance the prosthesis during the final insertion. When milling or “cross arch” stabilization are not possible, the guide pin along with the NEW STEADY will provide lateral stability to the prosthesis. This ensures a longer life for the retentive clips. The vertical height of the attachment can be adjusted by reducing both male and female parts from the original length of 5 mm down to 3.5 mm according to the pre-marked notches. Reducing the vertical height creates no difference in functionality. Removal and replacement of clips can be easily performed by the Dentist chairside.

LABORATORY






The ot vertical attachments and retentive clips can be lowered in height, in order not to risk inconveniences, it is advisable not to shorten them beyond the indicative sign * of 3.5 mm.

## TECHNIQUE: SINGLE CASTABLE MALE ASSEMBLY

Parallelometer Key: insert the plug into the hole of the attachment, rotate a few times to obtain the correct seal and be able to slide it out comfortably after fixing the attachment in the wax.

Completed the assembly and the wax modeling, close the hole with wax and create a lingual drilling, proceed with the sprue of the product.

Crowns with cast connection, finished and polished milling.

Retentive clip inserted on the cylindrical male. Waxed model (be careful not to dirty the coping with wax before duplication).

Duplicate model in coating with reproduction of the clip format.

Melted and sanded framework.

Finished work, green retentive clip inserted into the framework.

Work finished.

## TECHNIQUE: CALSTABLE MALE + STEADY ASSEMBLY

Parallelometer key: insert the plug into the hole of the adapted Steady to follow the mucous profile, rotate to remove the key after fixing it.

Place the Ot Vertical male gluing it lingually to the Steady and complete the waxing.

Crowns with molten attachment, the Steady and Vertical have been adapted to the mucosal profile.

Retentive clip inserted on the cylindrical male. Model discharged with wax (be careful not to dirty the coping with wax before duplication).

Duplicate model in coating with reproduction of the Steady format and clip.

Framework molded, cover with the wax the Steady portion to have an insertion guide and stability when melted.

Framework placed on the Steady

Framework on the model. Stability is guaranteed even without milling, thanks to the Steady

# COMBINED RETENTION ATTACHMENT
## For Multi-Functional Prosthetics

OT UNILATERAL

UNI-BOX CASTABLE

OT CAP Micro

OT STRATEGY CAP For Duplication

UNILATERAL SPHERICAL CASTABLE ATTACHMENT

RETENTIVE CAPS
OT CAP Micro


Clear • Standard


Pink • Soft


Yellow • Extra Soft


Green • Elastic


Black • Processing

RETENTIVE CAPS
OT Strategy for duplication


Clear • Standard


Pink • Soft

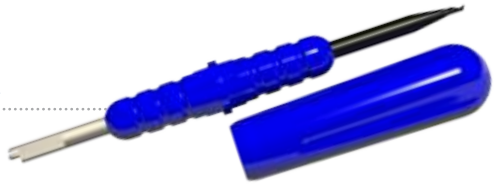

Yellow • Extra Soft


Black • Processing

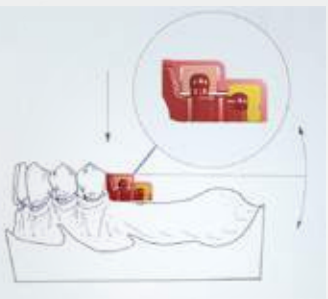
## TOOLS

PARALLELOMETER MANDREL OT CAP MICRO

OT STRATEGY CAPS INSERTER/EXTRACTOR TOOL



The OT UNILATERAL castable attachment from Rhein83 is specifically intended for unilateral, bilateral or implant bar applications without additional support from milled bracing arms.



OT UNILATERAL's exclusive design features a two-in-one combination of 1.8 mm horizontal and vertical spheres utilizing OT CAP and OT STRATEGY micro size female caps. The male section of the attachment is engineered with a vertical strut which extends through the base of the attachment providing exceptional lateral stability and distal support to the prosthesis.

The Uni-Box female component is a one piece castable housing that covers the entire male section, adding superior strength to the acrylic.

LABORATORY

### EXCLUSIVE FEATURE

2-IN-1 DESIGN - A COMBINATION OF HORIZONTAL AND VERTICAL MICRO SPHERES ARE USED WITH THE OT CAP AND OT STRATEGY ATTACHMENT SYSTEMS

### MULTIPLE BENEFITS

BECAUSE OF IT'S UNIQUE DESIGN, OT UNILATERAL PROVIDES:

* LATERAL STABILITY
* NO MILLING REQUIRED
* SUPERIOR RETENTION
* CONTROLLED RESILIENCY
* OVERALL FUNCTIONALITY
* ECONOMICAL SOLUTIONS

## UNILATERAL SADDLE: ATTACHMENT AND OVERSTRUCTURE UNIQUE PHASE SETTING UP

Positioning of the OT UNILATERAL bar using the OT CAP paralleling mandrel by starting with the analysis of the masticatory plan. Proceed by connecting the bar to the last modeled wax crown.

Place the positioning ring over the OT CAP micro sphere. Place the castable OT BOX component in position, the positioning ring will assure the proper position.

Join the Uni-Box component to the connector by using a pattern resin in order to reinforce the structure. Be careful not to have any material inside the Uni-Box component.

Remove the positioning ring by the OT CAP sphere and proceed with the sprue procedure.

Unique fusion is one of the best features of the UNILATERAL attachment.

Fused UNILATERAL and Uni-Box. Sandblast the casting by keeping attention not to "over-sandblast" the spheres. Insert the black laboratory caps and proceed by polishing the sphere.

In order to provide the optimal stability, wax-up carefully the saddle in order to embrace the ridge as much as possible.

Completed procedure: proper retentive caps (adeguate degrees of elasticity) are placed inside the fused Uni-Box component

## BILATERAL STRUCTURE: RESILIENT FUNCTIONALITY AND FREE MILLING PROCEDURE

Place the positioning ring over the OT CAP micro sphere. Place the castable OT BOX component in position, the positioning ring will assure the proper position.

Finished work: Ot cap and Ot Strategy caps, with the proper retention features, are inserted inside the Ot-Box component.

## IMPLANT SUPPORTED BAR: DISTAL EXTENSIONS AND COMBINED FUNCTIONALITY

Once the components to build the bar are inserted, place the OT UNILATERAL bar by using the OT CAP mandrel and by analyzing the masticatory plan. Connect it then distally to the modeled bar.

Cast bar thank to the combined functionality of the OT UNILATERAL. The prosthesis will count on a improved stability without any additional stress over the implants.

## OT LOCK
## LOCKING PIN TITANIUM


CLINIC

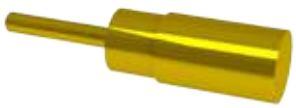
**OPTIONAL**
for the patient

**CONICAL GUIDE AND UNLOCKING TOOL**


UNLOCK THE PROSTHESIS BY INSERTING THE UNLOCKING TOOL INTO THE CONICAL GUIDE.

## ADJUSTABLE TITANIUM LOCKING PIN
SPACER RING SYSTEM TO POSITION THE KEY TO THE DESIRED SHAPE

CASTABLE SPACER RINGS

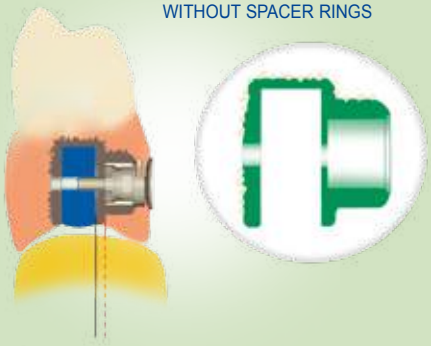


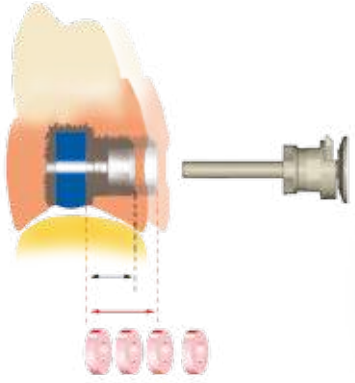
LONG WAXING POSITIONER

ADJUSTABLE SLIDING KEY

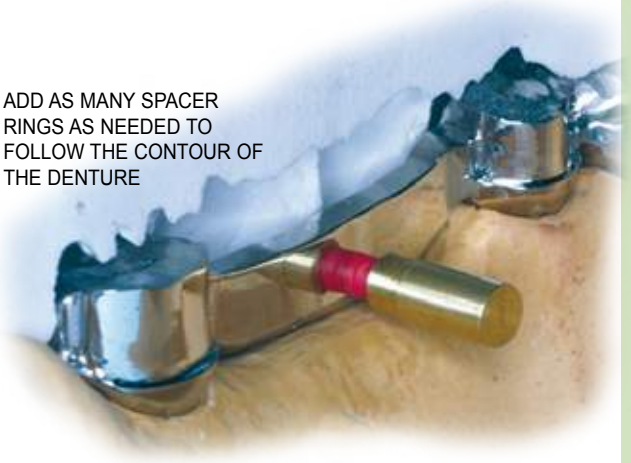
LABORATORY

LOCKING KEY IN POSITION WITHOUT SPACER RINGS

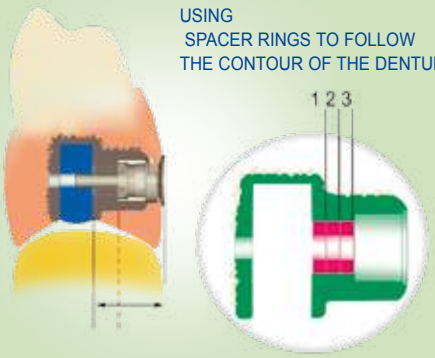




ADD AS MANY SPACER RINGS AS NEEDED TO FOLLOW THE CONTOUR OF THE DENTURE

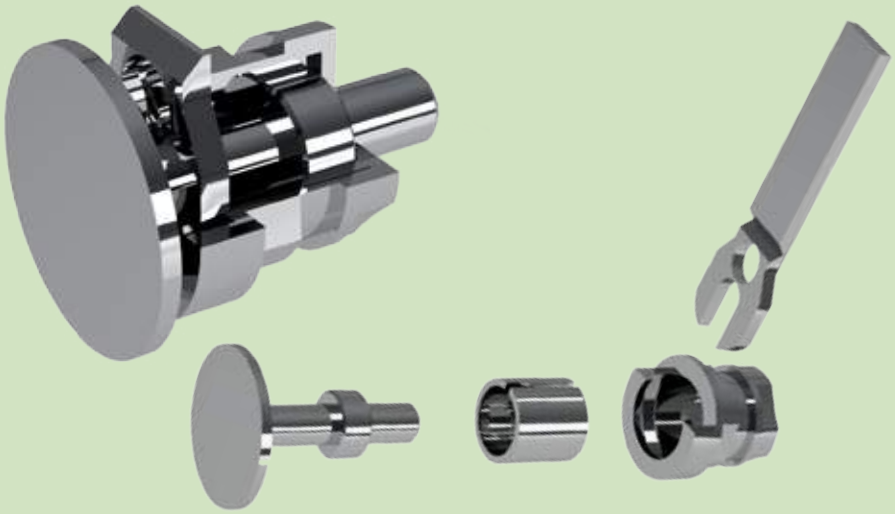


LOCKING KEY POSITIONED USING SPACER RINGS TO FOLLOW THE CONTOUR OF THE DENTURE



LABORATORY

## OT LOCK TITANIUM



Model the bar in resin and drill a 0.8 mm hole in the most ideal position.

Insert the ceramic pin through the hole.

The finished and polished bar.

Insert the housing shaper into the hole and lock it in place using resin. Be sure not go past the "STOP" when appling resin

Using resin, complete the model of the superstructure up to the "STOP". Remove the housing shaper and cast.

Pull out the brass positioner and cast.

Insert the pre-fabricated housing and bond.


Insert the positioner again. Proceed with wax and cure the resin.

Insert the locking key into the pre-fabricted housing guide. The "key-ring" mechanism is now locked.

Bend the locking key and brake it.

Apply the self-hardener composite material to stop the locking key and insert the locking pin in the hole.

Locking Pin locked in position. Finish and polish.

Finished prosthesis. Determine whether or not to use the EXTRACTOR KEY

# OVERDENTURE ATTACHMENTS - SPHERO FLEX - SPHERO BLOCK

## Rotating & Stationary Ball Abutments For Divergence Correction

TITANIUM + TIN COATING PROVIDES 1600 VICKERS HARDNESS

### Sphero FLEX

"SELF-PARALLELING" SPHERES

2.5 mm

### Sphero BLOCK

STATIONARY BALL ABUTMENT

1.8 mm

2.5 mm

### OT Special BOX

NORMAL- Green

MICRO - Red

IMPRESSION COPING
Normal / Micro size

ANALOGS
SPHERO FLEX / SPHERO BLOCK

PROTECTIVE DISK

UNIVERSAL KEY + HANDPIECE CONNECTOR

**MANUAL TORQUE WRENCH**

For Sphero block - flex and Ot Equator 15/35Ncm Strenght - Max 50Ncm torque, suggested 25Ncm.

STAINLESS STEEL AND TITANIUM HOUSINGS
Normal / Micro
for curing welding or bonding

ELASTIC RETENTIVE CAPS
Normal / Micro

Clear • Standard
Pink • Soft
Yellow • Extra Soft
Green • Elastic
Black • Processing

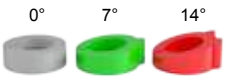
TITAN CAP
Normal / Micro

EXTRA RESILIENT CAPS

Gold • Elastic
Silver • Elastic Gummy

### OT Classic BOX

BARS
NORMAL SIZE = Green + Yellow
MICRO SIZE = Red + Yellow



0° 7° 14°

**DIRECTIONAL RINGS**
(REQUIRED FOR LAB AND CLINICAL PROCEDURES)

CONNECTOR
For OT Box

The Sphero Flex implant overdenture attachment is compatible with all implant systems currently on the market.. Featuring a rotating ball with a diameter of 2.5 mm that is flexible to 7.5° in all directions. When used with a 14° directional ring, Sphero Flex corrects divergence up to 43° between two implants. Sphero Flex creates a passive path of insertion which reduces trauma to the implant.

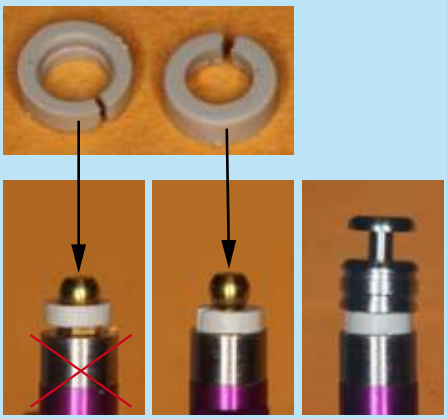
Sphero Block is a "one-piece" milled stationary ball implant attachment. It is available in 2.5 mm and 1.8 mm diameters. Sphero Block provides exceptional stability and corrects divergence up to 28° between 2 implants Sphero Block implant attachments are compatible with all implant systems currently on the market.

Sphero Flex and Sphero Block are manufactured with cuff heights ranging from 1 mm to 7
NOTE: The Sphero Flex and Sphero Block attachments are available for all platform diameters.

## CLINIC

### DIRECTIONAL RINGS CORRECT PLACEMENT

Before placing the impression abutment on the implant it is suggested to put a gray directional ring (for parallel systems) or a ring for angled implants if not parallel. This will keep the impression coping "on level" during the impression. The directional rings have only one direction of insertion.



Wrong placement

Correct placement

## LABORATORY

3 EASY STEPS

1. Place directional rings (green and red are shown here) over the spheres establishing a level plane.

2. OT BOX positioners are placed over spheres to support box housing during framework fabrication.

3. After gluing the 2 OT BOX parts, cut and use the necessary pieces for the housing.

## CHAIRSIDE PROCEDURE FOR POSITIONING THE CAPS

Screw the attachment into the implant. For best results, unscrew and screw the attachment 3/a times and then tight firmly.

Select the appropriate directional rings and place them over the spheres. Be sure that the ring is aligned with the hex and seated properly on the platform.

Once the directional rings have been positioned, it is advisable to remove the rententive caps and place a protective disk over the spheres. Replace the retentive caps in original position when finished.

Try the prosthesis in the mouth. Check to see if there is enough space for the retentive caps. Fill the holes with self-curing resin and position the prosthesis over the caps and spheres in the patient's mouth.

Once the resin has hardened, remove the prosthesis. Remove the protective disk along with any excess resin.

Finished prosthesis

## TAKING IMPRESSION TRANSFER

Place the directional ring over the sphere with the flat side facing down. Place the impression coping over the sphere.

Rotate the directional rings to achieve a common axis parallel to the occlusal plane and take the impression.

Remove impression. Directional rings must be removed from the impression and spheres.

Place the analogs into the impression copings and send to the laboratory for model fabrication.

## OT BOX CLASSIC NORMAL - CAST REINFORCED ACRYLIC PROSTHESIS USING DIRECTIONAL RINGS

Place directional rings over the spheres. OT BOX is placed over the directional rings, ensuring that the horizontal plane is level. Connect with resin.

The constructed OT BOX substructure with reinforced wax pins. Sprued and ready for casting.

The cast substructure on the model. The metal reinforcement pins for each tooth are positioned according to the silicone mask.

Finished prosthesis with caps inserted in the cast OT BOX housings.

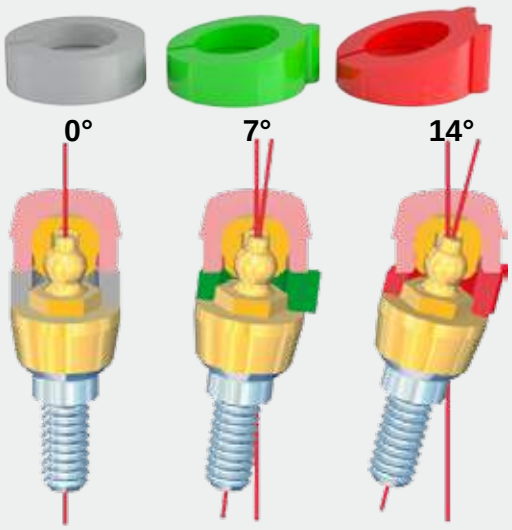
Screw the abutment into the analog. Be sure to use the abutment with the proper cuff height.

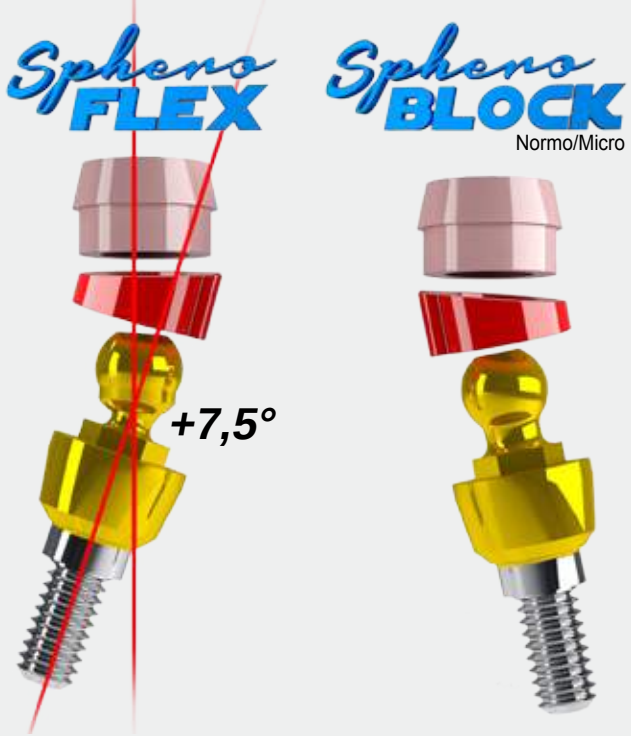
Directional rings are placed over the abutments and must be fully seated on the platform. Rotate rings until they are parallel in the same horizontal plane.

The nylon caps are inserted into the stainless steel housings and placed on top of the directional rings. Verify that the caps are still in the same horizontal plane.

The finished prosthesis with stainless steel housings and retentive caps in final position.

## DIRECTIONAL RINGS
for angle correction



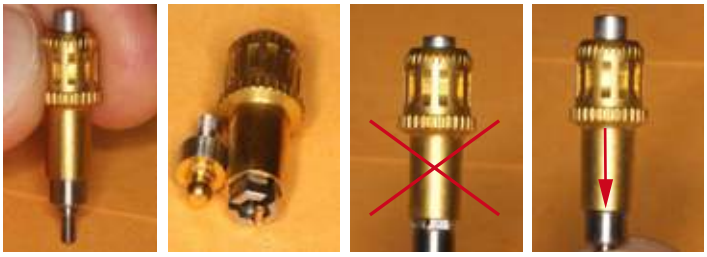




## SPHERO FLEX - SPHERO BLOCK

In order to achieve a passive fit for the final prosthesis using the SPHERO FLEX and SPHERO BLOCK attachment systems, it is necessary to use DIRECTIONAL RINGS. When not used, there is a high possibility that the attachments will not seat properly into the prosthesis due to incorrect positioning of the caps. This mis-alignment will result in premature wear of the caps causing additional trauma to the implant. SELECTION OF DIRECTIONAL RINGS: The position and angulation of the implant will determine which directional ring will be used. For parallel implants, a 0° DIRECTIONAL RING can be used. For implants that have greater divergence, a 7° or 14° ring can be used.
Place the DIRECTIONAL RING onto the hex of the attachment with the flat side down. Be sure that the ring is fully seated. Next, place the retentive cap onto the sphere and rotate the DIRECTIONAL RING until the cap is parallel with the other caps and are in the same horizontal plane. This ensures that the retentive caps are correctly alligned inside of the final prosthesis.

## INSTRUCTIONS FOR USE OF ABUTMENT DRIVER / WRENCH

Abutment Driver has a sliding mechanism that locks it onto the ball abutment. This needs to be fully engaged to properly tight the abutment without damaging the abutment. To dis-engage driver once the abutment is tightened in the mouth push down on the silver portion to loosen the driver from the abutment (Please screw and unscrew the abutment 3/4 times in order to achieve a fine adaption of the two threads). Then tight the abutment with a torque controller or the manual torque wrench.



Clamping mechanism | Incompletely seated driver | Driver fully seated

## UNIVERSAL “ANTI-UNSCREWING” SYSTEM WITH ELASTIC INSERT

Recommended for Sphero Flex, Sphero Block and OT Equator attachments with a cuff height over 5 mm. This system can also be used for single screws.
(Core Vent, Branemark, Pitt Easy, Bona Fit)

## ELASTIC INSERT

This component is manufacutred from bio-compatible materials with an “elastic” memory. While screwing in the attachment, the insert is compressed.When the threaded attachment is fully seated, the elastic insert will expand and return to it’s original form, which prevents rotation and unscrewing of the device.The insert is applied at the manufacturing facility UPON REQUEST. It can be applied to any screw with a diameter greater than 1.8 mm.

LABORATORY

## FEATURES:

- EASY TO USE
- COMPACT
- PRECISE
- ECONOMICAL

**Height of the mini-parallelometer: 17cm**

**divergence indicator**

The ***MINI-PARALLELOMETER*** allows accurate positioning of attachments without the need for an expensive milling machine. The ***MINI-PARALLELOMETER*** is a useful and economical device for the laboratory technician that can be used in day-to-day operations or in a training environment.

**INSTRUCTIONS FOR USE**

Place the stone model on the swivel base. Rotate the base until the ideal model position is found. Insert the mandrel into the notch on the horizontal extension arm and lock it into place by tightening the screw. Adjust the height by moving the horizontal arm up and down. Once the correct height has been found, lock the arm into position by tightening the rear locking screw.

CH Measurer

To determine the tissue height above the implant and eliminate mistakes when choosing the correct attachment, the Cuff Height Measuring tool is reccomended. The Cuff Height Tool is compatible with all implants that have an internal or external hex connection.

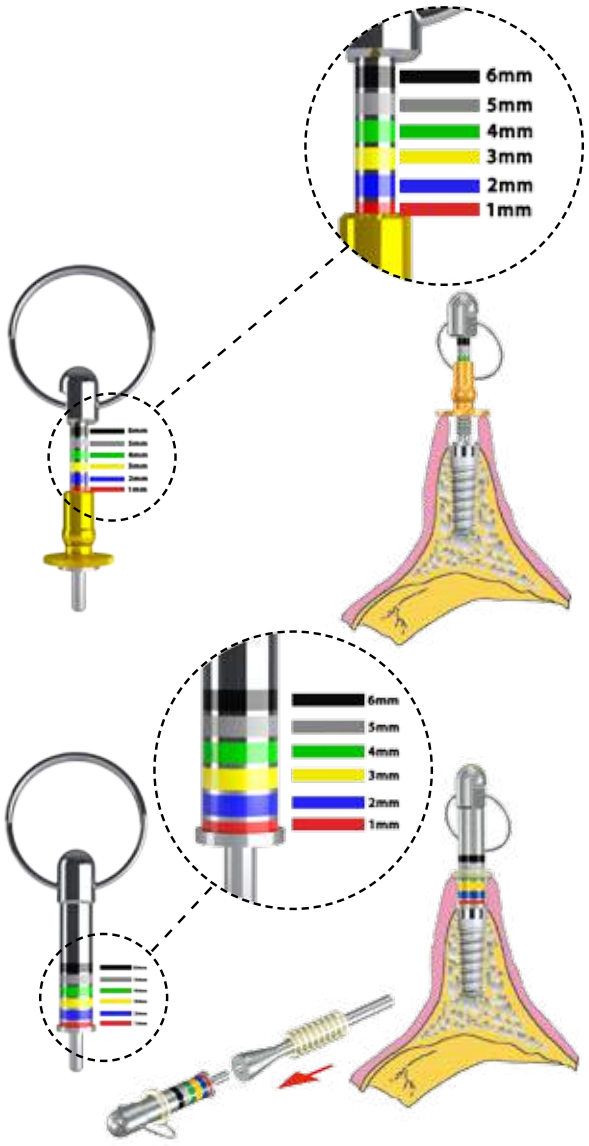
## CUFF HEIGHT MEASURING TOOL FOR IMPLANTS

1. Rotate upwards the gold colored plate until the tool is completely open.

2. Insert the tool into the implant. Be sure that it is fully seated on the top of the implant.
3. Firmly hold the tool and rotate the gold plate clockwise until it contacts the ridge.
4. Remove the tool and read the color coded rings indicated on the pin to determine the cuff height.

NOTE:
When a colored ring is completely covered, and only the silver band between colors is visible, it is recommended to utilize the next (higher) color.

IMPORTANT:
Before ordering an attachment, it is necessary to specify: Implant manufacturer, implant brand, diameter, internal or external hex connection and cuff height. The cuff height is determined by taking the corresponding color from the cuff height measuring tool. For implants with an internal hex connection the cuff height will range from .5 mm to 7 mm and for implants with an external hex connection, the cuff height will range from 1 mm to 7 mm.




**Cuff Height Measuring Tool**
**With Stationary Pin**
The cuff height measuring tool with stationary pin provides the same functionality as the tool with a threaded pin, however it is used in cases where there is limited space between two implants.

**Cuff Height Measuring Tool**
**With Threaded Pin And Ball Indicator**
With easy to read color-coded millimeter measurements, Dentists and dental laboratories can accurately measure tissue height between 0.5 mm and 7 mm. The ball indicator outlines where the male component of the attachment will seat above the tissue.

# BROKEN SCREW EXTRACTOR KIT FOR IMPLANTS

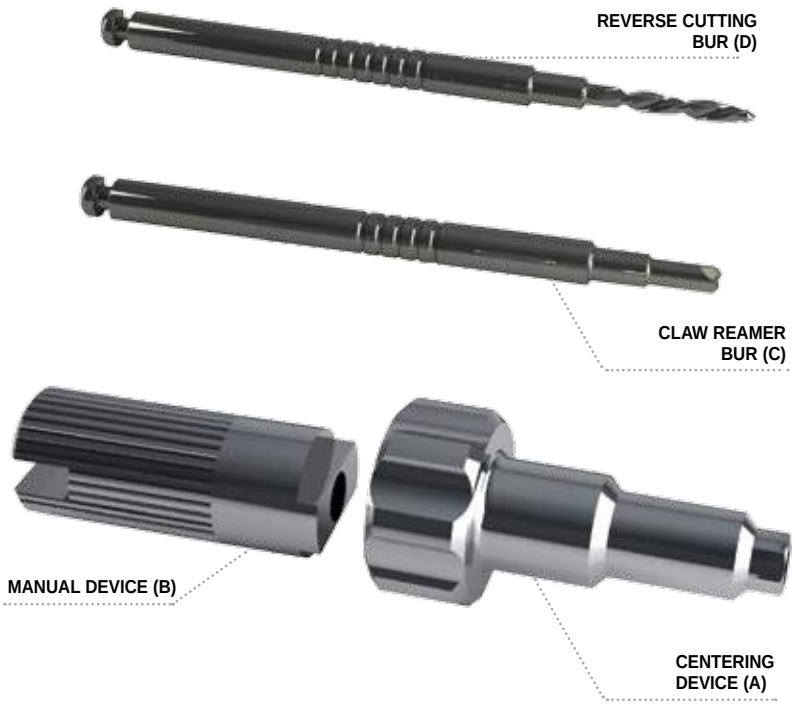
## FOR REMOVAL OF BROKEN IMPLANT SCREWS



### AVAILABLE FOR:

- Implants with INTERNAL HEXAGON (type SCREW VENT and similar)
- Implants with EXTERNAL HEXAGON (type BRANEMARK and similar)

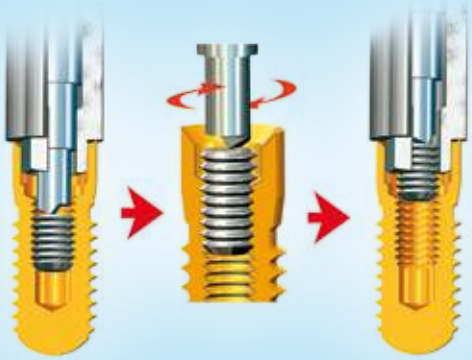
inserted the CLAW REAMER BUR (C) in the MANUAL DEVICE (B) for the manual removal of the broken screw




### CLINIC

X-RAY OF THE BROKEN SCREW FRAGMENT

BROKEN SCREW REMOVED



BROKEN SCREW BEING REMOVED

### COMPONENTS AND ACCESSORIES:

A CENTERING DEVICE
B MANUAL DEVICE
C CLAW REAMER BUR
D REVERSE CUTTING BUR

# BROKEN SCREW EXTRACTOR KIT FOR IMPLANTS

## FOR REMOVAL OF BROKEN IMPLANT SCREWS

A broken screw inside an implant is a serious, even if not so frequent, problem. With the BROKEN SCREW EXTRACTOR KIT, you can remove the broken screw fragment from the implant if it has not been cemented or if the implant internal thread has not been damaged in a previous removal attempt. In 90% of the cases the broken screw can be easily unscrew but, the operation must be carried out with great skill, patience and attention. The time necessary for the removal may depend on a number of factors, including the location of the implant which may facilitate or complicate the operation. Once the screw has been removed, the leftovers must be removed from the implant with air, water, and suction.

**WARNING:**
During the use it is mandatory to cool down the CENTERING DEVICE (A), the CLAW REAMER BUR (C) and the REVERSE CUTTING BUR (D) with a lot of water in order to not overheat the implant; consequently, the bone will be protected from any risk of overheating and necrosis. The effectiveness of the CLAW REAMER BUR and of the REVERSE CUTTING BUR is optimal for three extractions of broken screws. The REVERSE CUTTING BUR is extremely hard but brittle to bending; in order to avoid its breaking it is absolutely necessary to that the CENTERING DEVICE does not move during the entire operation. For some types of connection the BROKEN SCREW EXTRACTOR KIT is available in stock; for other types of connection it is necessary to start production and the production time increases to a maximum of 10 working days.

**INSTRUCTIONS FOR USE:**
Insert the CLAW REAMER BUR into the CENTERING DEVICE by inserting them into the implant and with a constant pressure on the broken screw through the MANUAL DEVICE (B), unscrew it and remove it from the implant (Fig.1 and 2). In case the screw remains locked inside the implant, insert the CLAW REAMER BUR into the 20:1 implantology contra-angle handpiece. Set the implant insertion program in anti-clockwise rotation and always through the MANUAL DEVICE (B) insist on the broken screw to flatten it and prepare it for the REVERSE CUTTING BUR that will destroy it (Fig.3). Insert the REVERSE CUTTING BUR in the 20:1 implantology contra-angle. Set the program in anti-clockwise rotation with speed between 500 and 600 rpm. Refrigerate with plenty of water during this operation. Insert the REVERSE CUTTING BUR into the CENTERING DEVICE, start the rotation, keep it pressed for no more than 3 seconds on the broken screw and release. This alternating movement facilitates the entry of water for the refrigeration of the implant and of the REVERSE CUTTING BUR. It is absolutely necessary that the CENTERING DEVICE does not move during the whole operation (Fig.4). If the CENTERING DEVICE moves, the REVERSE CUTTING BUR will break. Once all laser engravings of the REVERSE CUTTING BUR disappear in the CENTERING DEVICE the operation is complete and the screw is completely destroyed.
Once the screw has been destroyes, the leftovers must be removed from the implant with air, water, and suction.

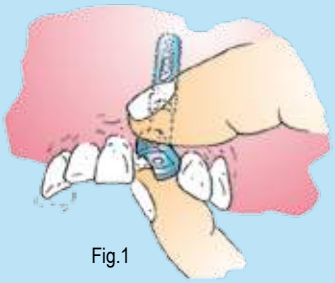


Fig.1

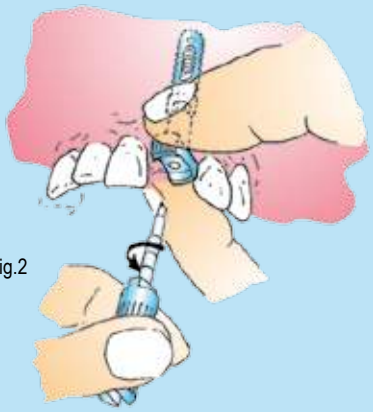


Fig.2

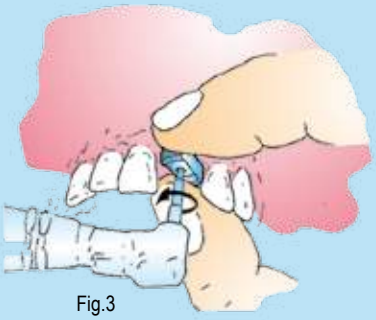


Fig.3


Fig.4

# POLISHING BURS KIT BY CARLO BORROMEO

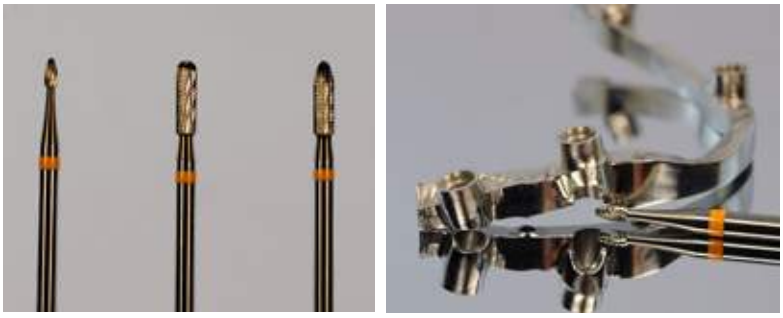

## METAL POLISHING KIT

From the experience of Carlo Borromeo, dental technician with thirty years of experience in metallurgy and casting, precursor of the use of digital techniques for the construction of metal structures, has come to light a set dedicated to the metal polishing. The aim was to identify a simple protocol that could be applied by everyone.

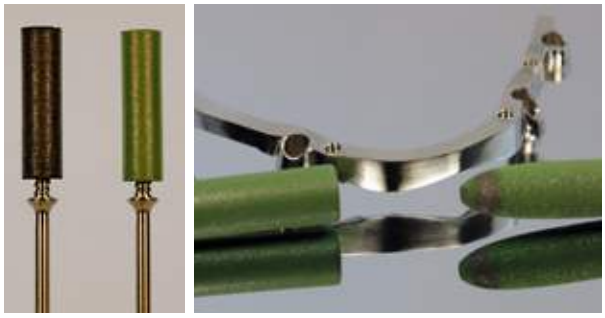
Well polished metals surfaces avoid or delay the plaque adhesion. Clean surfaces are very important to reduce the risk of perimplantitis. Also the retention systems (attachments) should be carefully polished so to allow them to work correctly and for much longer reducing the possibility of abrasion and therefore of malfunction.

The internal walls of the counter-bar if well polished prevent the formation of plaque, thus increasing the durability of the attachments and the functionality of the denture.

Polishing milled parts

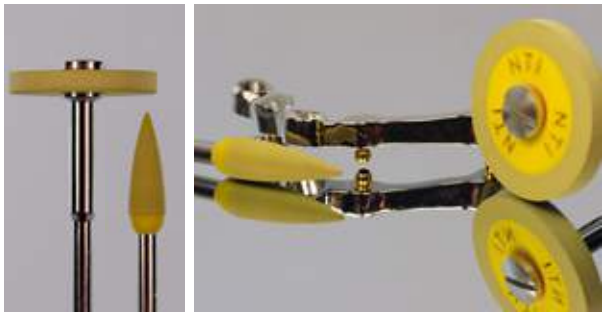


Finishing



Polishing extended parts

Polishing small parts around connections



Rubbers with fine diamond grains

Final polishing

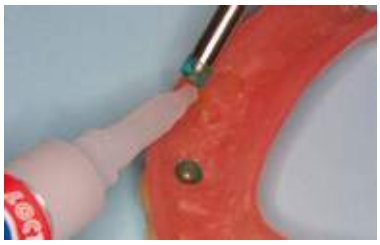
## REPLACEMENT OF CAPS

Rhein83 recommends that caps should be replaced every 12 months. The longevity of the caps is affected by many variables including: original case design, patient hygiene and general maintenance of the prosthesis.

## HOW TO REPLACE THE CAPS

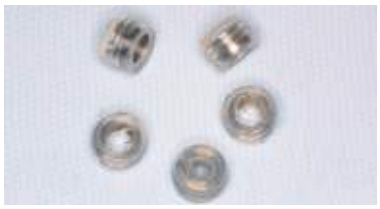
In a prosthesis with metal housings, the cap can be removed by using the extractor tool for caps; otherwise use a spherical bur at low RPM without damaging the housing.

In a prosthesis where the cap is incorporated directly into the resin, it can be removed by hand with a pointed instrument (such as a spatula) or the Rhein83 cap extractor tool. If a bur is used, be careful to remove only the retentive cap and to not modify the form that remains in the resin. If the resin site is damaged during the removal of the cap, repair the area with self curing resin before inserting the new cap. The cap insertion tool is used for this procedure.



## GREEN ELASTIC CAPS

These caps are highly elastic and have a medium level of retention. In cases where metal housings are used, it is recommended to apply a drop of adhesive (cyanoacrylic) on the inside of the housing before inserting the cap.



## TITAN CAPS

These caps were designed to be used on the OT CAP TECNO as well as the Normal and Micro attachments with machined titanium spheres.

## CAP INSERTION TOOL

When using high retention caps, it is recommended to insert them directly in the clinic into the housing using the cap insertion tool.
OT CAP Normal / Micro OT Reverse.

## PROSTHESES WITH MULTIPLE ATTACHMENTS

In order to balance the retentive levels of a prosthesis with multiple attachments, it is possible to use caps with different levels of retention.
REAMERS AND CAP TESTERS: if the retention of the caps is too hight, insert the reamer into the caps and rotate it in a clockwise direction, after only a few rotations it will wear down the perimeter which will reduce the retention. Try the prosthesis in the mouth, if it is still too retentive, repeat the operation with the reamer, In order to avoid trying the prosthesis in the mouth too many times, one can use the spherical tester, in order to evaluate the holding strength.

## HOW THE RETENTIVE CAP FUNCTIONS

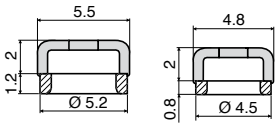
The Rhein83 caps are manufactured with a high elasticity which creates both mechanical and frictional retention resulting in a larger contact zone between the cap and the lower portion of the sphere. A small space between the metal housing and the cap allows the cap to expand as it passes over the equator of the sphere. Once completely engaged, the cap returns to its original form.

## POLISHING OF THE “CAST” ATTACHMENTS:

It is recommended that only glass beads or a soft cloth wheel are used to polish attachments. In order to avoid damage to the sphere duing these procedures, it is a good practice to cover the spheres with a retentive cap. The retentive caps can be reused again for this procedure.

# DEMONSTRATION MODELS

| TRADITIONAL PROSTHESES | REF. | DESCRIPTION |
|---|---|---|
|  | 06P | Model with upper prosthesis with OT Cap<br>Normal / Micro size attachments:<br>1 OT CAP NORMAL<br>1 OT CAP MICRO<br>1 Frame with OT BOX mono housings<br>5 Acrylic teeth |
|  | 07P | Model with lower prosthesis with OT Strategy<br>1 OT STRATEGY<br>1 OT STRATEGY + STEADY<br>1 Frame with caps and duplicated housings<br>5 Acrylic teeth |
|  | | PROSTHESIS ON NATURAL TEETH |
| | 04P | Model with lower “Overdenture” prosthesis:<br>1 PIVOT FLEX titanium post<br>1 Cast post with OT CAP sphere<br>1 Complete denture with 14 teeth<br>1 Cast OT BOX reinforcement incorporated in the denture |
| | 04P/A | Same model as 04P. Denture with pre-fabricated STAINLESS STEEL HOUSINGS for retentive caps |
|  | 09P | MODEL WITH LOWER PROSTHESIS WITH OT VERTICAL<br>1 OT VERTICAL<br>1 OT VERTICAL + STEADY<br>1 Frame with clips and duplicated housing<br>6 Acrylic teeth |
|  | | IMPLANT MODELS |
| | 031 | Model with lower prosthesis with SPHERO FLEX abutments:<br>2 Implant analogs<br>1 SPHERO FLEX<br>1 SPHERO BLOCK<br>1 Complete denture with 14 teeth<br>1 Cast OT BOX reinforcement incorporated in the denture |
| | 031/A | Same model as 031. Denture with pre-fabricated STAINLESS STEEL HOUSINGS |
|  | | PROSTHESIS ON FIXTURES |
| | 08B | Model with lower prosthesis with OT Bar Multiuse:<br>2 Implant analogs<br>1 Cast bar with copings<br>1 OT BAR MULTIUSE<br>1 Cast superstructure with two retentive clips<br>1 Complete denture with 14 teeth |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2
1.2
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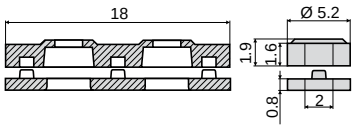
4.8
2
0.8
Ø 4.5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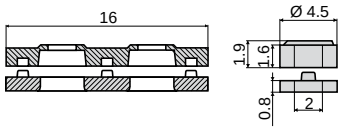
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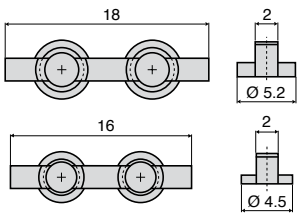
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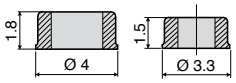
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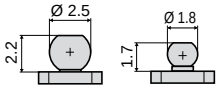
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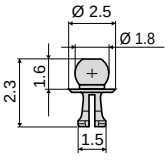
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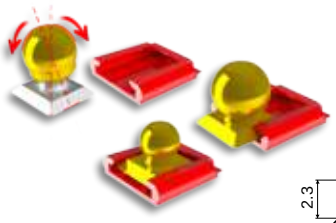
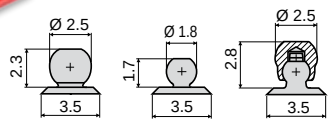
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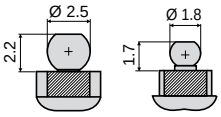
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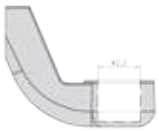
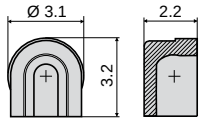
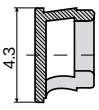
1.7



Ø 3.1
2.2
3.2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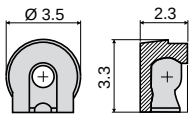
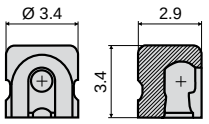
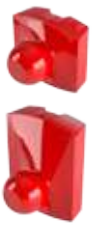
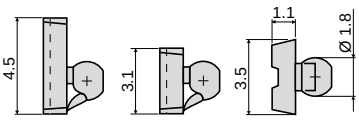
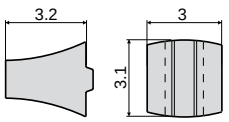
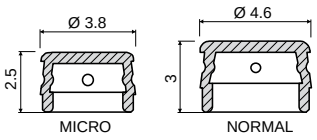

Ø 3.5
2.3
3.3

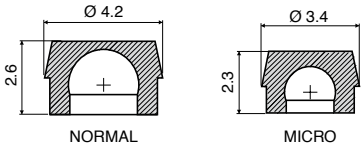


Ø 3.4
2.9
3.4

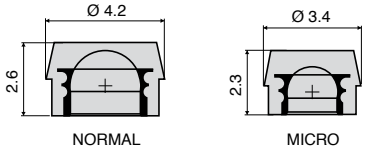


4.5
3.1
1.1
3.5
Ø 1.8

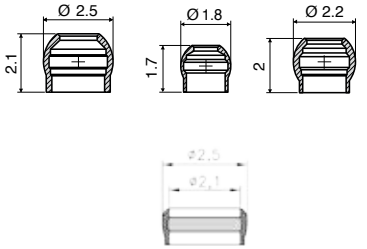


3.2
3
3.1

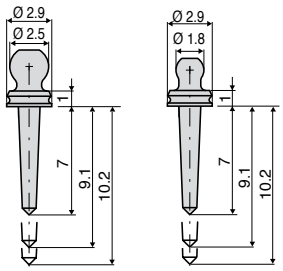
# PRODUCT RANGE - SIZES AND DIMENSIONS

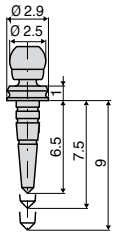


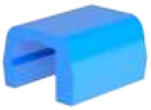



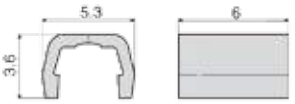



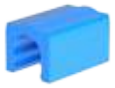



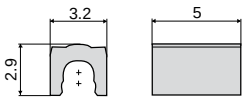



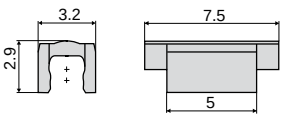



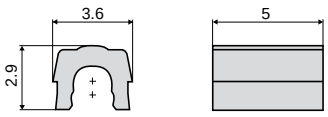



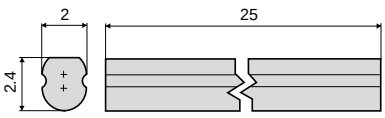


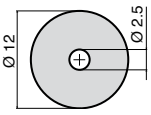



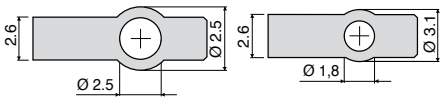


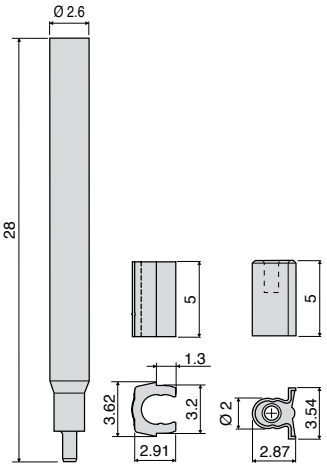



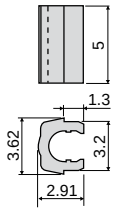



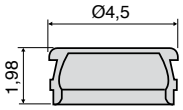



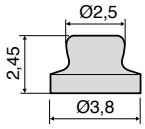



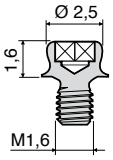



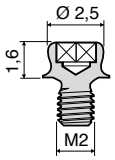



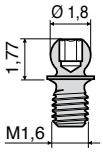



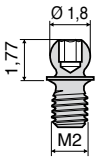

Ø4,5
1,98


Ø2,5
2,45
Ø3,8


Ø 2,5
1,6
M1,6


Ø 2,5
1,6
M2


Ø 1,8
1,77
M1,6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1,77
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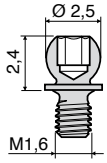
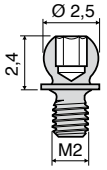
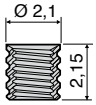
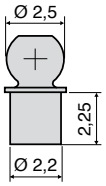
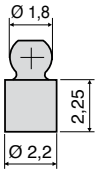

Ø 2,5
2,4
M1,6


Ø 2,5
2,4
M2


Ø 2,1
2,15


Ø 2,5
2,25
Ø 2,2


Ø 1,8
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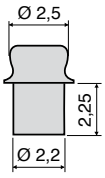
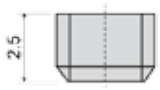
Ø 2,2


Ø 2,5
2,25
Ø 2,2


2,2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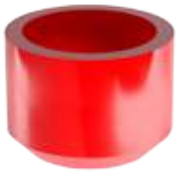
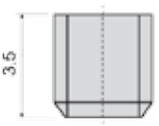
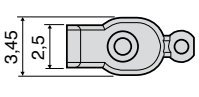
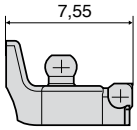



3,5


3,45
2,5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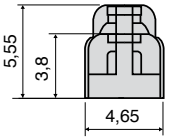
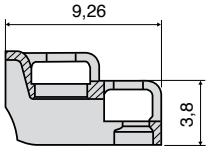

5,55
3,8
4,65


9,26
3,8

# KITS AND CODES

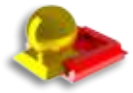

Ref.: 005SKLUS
INTRODUCTORY KIT FOR LABORATORY contains assorted attachments and tools

Ref.: 011SPL
**S.P.L.** INTRODUCTORY KIT contains assorted titanium BLOCK pivots, castable pivots, retentive caps and two regulating tools

## ATTACHMENTS OT CAP SYSTEM

Ref.: 038STF

**TITANIUM FLEX SINGLE SPHERE NORMAL SIZE + TiN**
Kit contains
2 SINGLE TITANIUM SPHERES
2 PINK CAPS - SOFT RETENTION
1 SPHERE HOLDER
2 CASTABLE SLIDING BASES



Ref.: 038STN

**TITANIUM SINGLE SPHERE NORMAL SIZE + TiN**
Kit contains
2 SINGLE TITANIUM SPHERES
2 PINK CAPS - SOFT RETENTION
1 SPHERE HOLDER
2 CASTABLE SLIDING BASES

Ref.: 038STM

**TITANIUM SINGLE SPHERE MICRO SIZE + TiN**
Kit contains
2 SINGLE TITANIUM SPHERES
2 PINK CAPS - SOFT RETENTION
1 SPHERE HOLDER
2 CASTABLE SLIDING BASES

Ref.: 093CTN NORMAL

Ref.: 093CTM MICRO

**OT CAP TECNO - NORMAL/MICRO**
Kit contains
2 PRE-ANGULATED CASTABLE EXTENSIONS
2 TITANIUM SINGLE THREADED SPHERES
2 TRANSPARENT CAPS NORMAL/MICRO
2 PINK CAPS NORMAL/MICRO
2 YELLOW CAPS NORMAL/MICRO

Ref.: 092CAN

**OT CAP NORMAL SIZE**
Kit contains
4 SINGLE SPHERES
4 PINK RETENTIVE CAPS
4 STAINLESS STEEL HOUSINGS
(2 for resin - 2 for soldering)
4 PLASTIC POSITIONING RINGS

Ref.: 092CAM

**OT CAP MICRO SIZE**
Kit contains
4 SINGLE SPHERES
4 PINK RETENTIVE CAPS
4 STAINLESS STEEL HOUSINGS
(2 for resin - 2 for soldering)
4 PLASTIC POSITIONING RINGS

Ref.: 196BCN

**"ECONOMIC" OT CAP NORMAL SIZE**
Kit contains
1 CASTABLE BAR
1 CASTABLE BEVELLED BAR
4 CLEAR RETENTIVE CAPS
(Standard retention)

Ref.: 197BCM

**"ECONOMIC" OT CAP MICRO SIZE**
Kit contains
1 CASTABLE BAR
1 CASTABLE BEVELLED BAR
4 CLEAR RETENTIVE CAPS
(Standard retention)

Ref.: 099BSN

**OT CAP & MONO OT BOX FOR FRAME NORMAL SIZE**
Kit contains
2 CASTABLE BARS (1 straight - 1 bevelled)
4 CLEAR RETENTIVE CAPS
4 CASTABLE MONO OT BOX
4 PLASTIC POSITIONING RINGS

Ref.: 099BSM

**OT CAP & MONO OT BOX FOR FRAME MICRO SIZE**
Kit contains
2 CASTABLE BARS (1 straight - 1 bevelled)
4 CLEAR RETENTIVE CAPS
4 CASTABLE MONO OT BOX
4 PLASTIC POSITIONING RINGS

Ref.: 058BSN

**OT BOX SPECIAL NORMAL SIZE + CONNECTORS**
Kit contains
2 OT BOX SPECIAL BARS
4 PLASTIC POSITIONERS
4 CONNECTORS

Ref.: 058BSM

**OT BOX SPECIAL MICRO SIZE + CONNECTORS**
Kit contains
2 OT BOX SPECIAL BARS
4 PLASTIC POSITIONERS
4 CONNECTORS

Ref.: 153BCN

**OT BOX CLASSIC NORMAL SIZE + CONNECTORS**
Kit contains
2 UPPER BARS
2 LOWER BARS
4 PLASTIC POSITIONERS
4 CONNECTORS

Ref.: 153BCM

**OT BOX CLASSIC MICRO SIZE + CONNECTORS**
Kit contains
2 UPPER BARS
2 LOWER BARS
4 PLASTIC POSITIONERS
4 CONNECTORS

Ref.: 087CRS

**CONCAVE RECONSTRUCTIVE SPHERE**
Kit contains
2 CONCAVE SPHERES IN TITANIUM - TiN COATED
2 PINK CAPS SOFT RETENTION
1 INSERTION TOOL
1 GAUGE AND STRIP HOLDER
Available in 1.8 mm, 2.2 mm, 2.5 mm diameters

Ref.: 087CRE

**CONCAVE REPAIR OT EQUATOR**
Kit contains
2 CONCAVE OT EQUATOR IN TITANIUM - TiN COATED
2 PINK CAPS SOFT RETENTION
1 INSERTION TOOL
1 GAUGE AND STRIP HOLDER

Ref.: 089SRS

**SOLID RECONSTRUCTIVE SPHERE**
Kit contains
2 SOLID SPHERES IN TITANIUM - TiN COATED
2 PINK CAPS SOFT RETENTION
2 PROTECTIVE DISKS
1 KEY
Available in 1.8 mm diameter

Ref.: 064ACN NORMAL

**ASSORTED RETENTIVE CAPS**
Kit NORMAL - Kit MICRO
6 CLEAR CAPS - STANDARD RETENTION
6 PINK CAPS - SOFT RETENTION
6 YELLOW CAPS - EXTRA SOFT RETENTION
6 GREEN CAPS - VERY ELASTIC RETENTION

Ref.: 064ACM MICRO

**ASSORTED RETENTIVE CAPS**
Kit NORMAL - Kit MICRO
6 CLEAR CAPS - STANDARD RETENTION
6 PINK CAPS - SOFT RETENTION
6 YELLOW CAPS - EXTRA SOFT RETENTION
6 GREEN CAPS - VERY ELASTIC RETENTION

## S.P.L. PIVOTS

Ref.:
033PSF7R
033PSF9R
033PSF10R

**PIVOT FLEX - TITANIUM PIVOT**
**WITH SWIVEL SPHERE NORMAL SIZE**
**(Ø 2.5 mm)**
**FOR DIRECT OVERDENTURE**
(3 Sizes available)
Kit contains
1 TITANIUM PIVOT WITH ROTATING SPHERE (adapted for COPING COVER)
1 STAINLESS STEEL HOUSING FOR RESIN
2 PINK CAPS Normal Size - Soft retention
1 ALUMINIUM DISK
3 DIRECTIONAL RINGS

Normal Sphere ø 2,5
Micro Sphere ø 1,8

Ref.:
036PTN

**TITANIUM PIVOTS Normal Size**
**Adapted for COPING COVER**
Kit contains
5 TITANIUM PIVOTS Sphere 2.5 mm

Ref.:
036PTM

**TITANIUM PIVOTS Micro Size**
**Adapted for COPING COVER**
Kit contains
5 TITANIUM PIVOTS Sphere 1.8 mm

Ref.:
**Ref. 336PTE7**
**Ref. 336PTE9**
**Ref. 336PTE10**

**OT EQUATOR PIVOTS**

Ref.:
010PSP

**CASTABLE PIVOTS NORMAL SIZE**

Ref.:
012PSM

**CASTABLE PIVOTS MICRO SIZE**

Ref.:
A01MOG

**MOOSER BUR**
Reamer for post 7 mm, 9 mm, 10 mm

Ref.:
A03MOB

**MOOSER BUR**
Reamer for post 12 mm, 14 mm

Ref.:
485IC

**OT CAP NORMAL AND MICRO SIZE CAPS INSERTER/EXTRACTOR TOOL**

Ref.:
74AC01

**PARALLELOMETER MANDREL FOR OT CAP NORMAL SIZE**

Ref.:
74AC02

**PARALLELOMETER MANDREL FOR OT CAP MICRO SIZE**

Ref.:
74AC03

**PARALLELOMETER MANDREL FOR OT CAP TECNO NORMAL AND MICRO SIZE**

Ref.:
080RCN

**REAMER TOOL FOR CAPS OT CAP NORMAL SIZE**

Ref.:
080RCM

**REAMER TOOL FOR CAPS OT CAP MICRO SIZE**

Ref.:
082ATN

**TOOL FOR TESTING CAP RETENTION OT CAP NORMAL SIZE**

Ref.:
083ATM

**TOOL FOR TESTING CAP RETENTION OT CAP MICRO SIZE**

Ref.:
491EC

CAPS EXTRACTOR TOOL
WITH MULTIUSE HOUSING FOR CLIPS
AND CAPS INSERTION

## OT STRATEGY ATTACHMENTS

Ref.:
098SSS

**OT STRATEGY**
CAPS FOR DUPLICATION TECHNIQUE
Kit contains
4 CASTABLE MALES 2 Standard + 2 High
2 CASTAB:LE STEADY
4 RETENTIVE CAPS

Ref.:
098CAL

**OT STRATEGY**
CAPS FOR DUPLICATION TECHNIQUE
Kit contains
4 CASTABLE MALES (2 Standard + 2 High)
2 CASTABLE STEADY
4 STAINLESS STEEL HOUSINGS
2 POSITIONING RINGS
4 RETENTIVE CAPS

Ref.:
047ACS

**OT STRATEGY ASSORTMENT CAP KIT**
FOR DUPLICATION TECNIQUE
Kit contains
4 YELLOW CAPS - EXTRA SOFT RETENTION
4 PINK CAPS - SOFT RETENTION
4 CLEAR CAPS - STANDARD RETENTION

Ref.:
045ACS

**OT STRATEGY ASSORTMENT CAP KIT**
FOR STAINLESS STEEL HOUSINGS
Kit contains
4 YELLOW CAPS - EXTRA SOFT RETENTION
4 PINK CAPS - SOFT RETENTION
4 CLEAR CAPS - STANDARD RETENTION

Ref.:
486ICS

**OT STRATEGY CAPS INSERTER/EXTRACTOR TOOL**

Ref.:
75AC04

**PARALLELOMETER MANDREL FOR OT STRATEGY**

Ref.:
081RCS

**REAMER TOOL FOR OT STRATEGY CAPS**

## OT BAR MULTIUSE ATTACHMENTS

Ref.:
021OBM

**OT BAR MULTIUSE**
Kit contains
2 BARS
4 POSITIONING CLIPS A
4 POSITIONING CLIPS B
4 BOXES
4 RETENTIVE PINK CLIPS
4 RETENTIVE YELLOW CLIPS
2 CONNECTORS
1 GINGIVAL CONNECTOR

Ref.:
429IOBM

**OT BAR CLIPS INSERTER/EXTRACTOR TOOL**

Ref.:
028OCP

**PARALLELOMETER MANDREL FOR OT BAR MULTIUSE**

## OT VERTICAL ATTACHMENTS

Ref.:
071OBV

**OT VERTICAL**
Kit contains
4 CASTABLE MALES
4 CASTABLE STEADY
4 RETENTIVE WHITE CLIPS
2 RETENTIVE GREEN CLIPS
4 CASTABLE PARALLELOMETER KEYS + PIN

Ref.:
472ICV

**OT VERTICAL CLIPS INSERTER/EXTRACTOR TOOL**

# KITS AND CODES


## OT EQUATOR CASTABLE

Ref.: 092ECQ

OT EQUATOR CASTABLE

Kit Contains:
- 2 CASTABLE MALES
- 2 TITANIUM HOUSINGS
- 4 RETENTIVE CAPS

## OT EQUATOR FOR IMPLANTS

Ref.: 130

OT EQUATOR FOR IMPLANTS

Kit Contains:
- 1 OT EQUATOR
- 1 TITANIUM HOUSING
- 1 PROTECTIVE DISK
- 4 RETENTIVE CAPS

Ref.: 030

- 1 OT EQUATOR ABUTMENT
  *Compatible with ALL implant systems

Ref.: 335SBC

OT EQUATOR SMARTBOX KIT
self-aligning caps housing

Kit Contains:
- 1 SMARTBOX HOUSING WITH BLACK CAP FOR LABORATORY
- 1 PINK PROTECTIVE DISK
- 4 RETENTIVE CAPS
  (1 EXTRA-SOFT, 1 SOFT, 1 STANDARD, 1 STRONG)

Ref.: 330SBE

Kit Contains:
- 1 SMARTBOX HOUSING WITH BLACK CAP FOR LABORATORY

## OT EQUATOR BAR

Ref.: 160EQB

OT EQUATOR WITH
THREADED SLEEVE
For Bonding

Kit Contains:
- 2 THREADED OT EQUATOR-1.6 mm thread
- 2 THREADED SLEEVES-1.6 mm thread
- 2 STAINLESS STEEL HOUSINGS
- 2 WAXING SPACERS
- 8 RETENTIVE CAPS
  2 YELLOW - EXTRA SOFT
  2 PINK - SOFT
  2 CLEAR - STANDARD
  2 BLACK - PROCESSING

Ref.: 039SFE2

- 1 THREADED OT EQUATOR
  2 mm universal thread

## OT EQUATOR ELASTIC SEEGER

Ref.: 158ESA

Passive Bar Connection

ELASTIC SEEGER

Kit Contains:
- 1 CASTABLE CYLINDER HOUSINGS FOR SEEGER
- 1 SELF-EXTRACTING SEEGER
- 1 TITANIUM LOCKING SCREW FOR SELF-EXTRACTING SEEGER

## TOOLS

Ref.: 74AC01 • PARALLELOMETER MANDREL NORMAL

Ref.: 774CHE • OT EQUATOR SQUARE DRIVER 1.25 mm + HOLDER

Ref.: 760CE • OT EQUATOR HANDPIECE CONNECTOR 1.25 mm

Ref.: 085SIS • STEEL INSERTION TOOL FOR SEEGER

Ref.: 491EC • CAPS EXTRACTOR TOOL WITH UNIVERSAL INSERTER HOUSING

## ACCESSORIES

Ref.: 044CAIN • 2 IMPRESSION TRANSFER ( pick up impression )

Ref.: 144MTE • 2 IMPRESSION TRANSFER

Ref.: 144AE • 2 STAINLESS STEEL ANALOGS For OT Equator

Ref.: 485IC • CAPS INSERTER/EXTRACTOR TOOL (OT EQUATOR-NORMO-MICRO)

## SPARE PARTS

OT EQUATOR CAP ASSORTMENT KIT

Ref.: 192ECE

Kit Contains:
- 1 STAINLESS STEEL HOUSING
- 1 BLACK CAP - PROCESSING
- 4 RETENTIVE CAPS:
  1 YELLOW - EXTRA SOFT - 1 PINK - SOFT
  1 CLEAR - STANDARD - 1 VIOLET - RIGID
  1 BLACK - PROCESSING - 1 PROTECTIVE DISK

## OT CAP / OT EQUATOR IMPRESSION COPINGS

Ref.: 044CAIN
- 2 STAINLESS STEEL IMPRESSION COPINGS For OT CAP Normal and OT EQUATOR

Ref.: 044CAI22
- 2 STAINLESS STEEL IMPRESSION COPINGS Ø 2,25mm Spheres with interchangeable cap

Ref.: 044CAIM
- 2 STAINLESS STEEL IMPRESSION COPINGS For OT CAP Micro

## TOOLS

Ref.: 772CSF
- HEX DRIVER - 0.9 mm For Threaded Micro Sphere

## SINGLE THREADED SPHERES

### WITH THREADED BONDING SLEEVE

Ref.: 139KSFN

**Titanium + TiN Threaded Sphere With Sleeve For Bonding Kit - NORMAL SIZE**

Kit contains:
- 2 TITANIUM SINGLE THREADED SPHERES 1.3 mm Hex, 1.6 mm Thread
- 2 TITANIUM THREADED SLEEVES For Bonding
- 2 WAXING SPACERS For Threaded Sphere - Normal Size

Ref.: 139KSFM

**Titanium + TiN Threaded Sphere With Sleeve For Bonding Kit - MICRO SIZE**

Kit contains:
- 2 TITANIUM SINGLE THREADED SPHERES 0.9 mm Hex, 1.6 mm Thread
- 2 TITANIUM THREADED SLEEVES For Bonding
- 2 WAXING SPACERS For Threaded Sphere - Micro Size

## SINGLE THREADED SPHERES

### NORMAL - MICRO

Ref.: 039SFN2
- 1 TITANIUM + TiN THREADED SPHERE NORMAL 1.3 mm Hex, 2.0 mm Thread

Ref.: 039SFM2
- 1 TITANIUM + TiN THREADED SPHERE MICRO 0.9 mm Hex, 2.0 mm Thread

## OT LOCK

Ref.: 880CLT

OT LOCK KIT

Kit contains:
- 1 COMPLETE OT LOCK
- 1 BRASS POSITIONER
- 1 CERAMIC PIN

Ref.: 880CLR

ADJUSTABLE OT LOCK KIT

Kit contains:
- 1 COMPLETE ADJUSTABLE OT LOCK
- 1 EXTENDED BRASS POSITIONER
- 1 CERAMIC PIN
- 9 CASTABLE SPACER RINGS

## OT LOCK SPARE PARTS

Ref.: 882CG
- CONICAL GUIDE

Ref.: 882CAS
- UNLOCKING TOOL

## INCLUDES OT CAP & OT BOX - OT STRATEGY - OT BAR - OT VERTICAL - OT UNILATERAL - OT EQUATOR

### "BASIC" PROMOTIONAL KIT FOR LABORATORY


Ref.: 005SKLBUS

TOOLS:
- 1 TWEEZER
- 1 PARALLELOMETER MANDREL OT CAP NORMO
- 1 PARALLELOMETER MANDREL OT CAP MICRO
- 1 PARALLELOMETER MANDREL OT STRATEGY
- 1 PARALLELOMETER MANDRELOT BAR MULTIUSE
- 1 BLUE PLASTIC UNIVERSAL INSERTION HANDLE
- 1 INSERTION TOOL - OT CAP NORMAL / MICRO
- 1 INSERTION TOOL - OT STRATEGY
- 1 INSERTION TOOL - OT BAR MULTIUSE
- 1 INSERTION TOOL - OT VERTICAL

Kit contains:

OT CAP - OT BOX:
- 16 ASSORTED CASTABLE PIVOTS NORMAL / MICRO
- 4 CASTABLE SPHERES NORMAL / MICRO
- 2 CASTABLE OT CAP BARS NORMAL / MICRO
- 2 CASTABLE OT BOX BARS CLASSIC (top + bottom) NORMAL / MICRO
- 1 CASTABLE OT BOX SPECIAL BARS NORMAL / MICRO
- 6 CASTABLE OT BOX CONNECTORS
- 4 CASTABLE OT BOX MONO HOUSING NORMAL / MICRO
- 8 POSITIONER RINGS NORMAL / MICRO
- 28 OT CAP RETENTIVE CAPS NORMAL / MICRO YELLOW, PINK, CLEAR, GREEN
- 9 BLACK CAPS - FOR PROCESSING NORMAL / MICRO
- 4 STAINLESS STEEL HOUSINGS NORMAL / MICRO FOR RESIN

OT STRATEGY:
- 4 OT STRATEGY MALES - 2 STANDARD BASE - 2 LONG BASE
- 2 CASTABLE STEADY
- 6 OT STRATEGY CAPS FOR STAINLESS STEEL HOUSING YELLOW, PINK, CLEAR

OT STRATEGY CONTINUED:
- 2 OT STRATEGY STAINLESS STEEL HOUSINGS
- 2 OT STRATEGY PLASTIC POSITIONING RINGS
- 6 OT STRATEGY CAPS FOR DUPLICATION TECHNIQUE YELLOW, PINK, CLEAR
- 4 BLACK CAPS - PROCESSING (for wax and for duplication technique)

OT EQUATOR:
- 2 CASTABLE MALES
- 2 STAINLESS STEEL HOUSINGS
- 4 RETENTIVE CAPS - 2 PINK, 2 CLEAR
- 2 BLACK CAPS FOR LABORATORY USE

OT UNILATERAL:
- 1 CASTABLE ATTACHMENT WITH COMBINED SPHERES
- 1 CASTABLE UNI-BOX
- 1 MICRO POSITIONING RING
- 2 OT CAP MICRO CAPS - 1 PINK, 1 BLACK
- 2 OT STRATEGY CAPS - 1 PINK, 1 BLACK For Duplication Technique
- 1 CONNECTOR

OT BAR MULTIUSE:
- 1 CASTABLE BARS
- 1 BAR EXTENSION
- 4 POSITIONING CLIPS (Type A - Type B)
- 2 CASTABLE BOXES
- 4 CLIPS - 2 PINK, 2 YELLOW

OT VERTICAL:
- 2 CASTABLE MALES
- 2 CASTABLE STEADY
- 4 CLIPS - 2 WHITE, 2 GREEN
- 2 PARALLELOMETER KEYS + PIN
- 2 CERAMIC PINS

## IMPLANTOLOGY

### SPHERO FLEX - BLOCK SYSTEM
### TITANIUM ATTACHMENTS FOR OVERDENTURES

Ref.: 109

**SPHERO FLEX**
- 1 Titanium Abutment with self-aligning 2.5mm sphere
- 2 Pink Caps - Soft Retention
- 1 Stainless Steel Housing
- 1 Protecitve Disk
- 3 Directional Rings

Ref.: 002

**SPHERO BLOCK NORMAL**
- 1 Titanium Abutment with stationary 2.5mm sphere
- 2 Pink Caps - Soft Retention
- 1 Stainless Steel Housing
- 1 Protective Disk
- 3 Directional Rings

Ref.: 003

**SPHERO BLOCK MICRO**
- 1 Titanium Abutment with stationary 1.8mm sphere
- 2 Pink Caps - Soft Retention
- 1 Stainless Steel Housing
- 1 Protective Disk
- 3 Directional Rings

## ANCILLARY ITEMS

14 cm height

Ref.: 00PB

**MINI PARALLELOMETER**
WITH UNIVERSAL TILTING MODEL TABLE
(FOR LABORATORY USE, COURSES, ETC.)

Ref.: OC

**OT CEM** is a self and photo curing cement. It is designed for permanent metal to metal bonding in the use of attachments in prosthetic implant solutions.

## SPHERO FLEX / SPHERO BLOCK TOOLS

Ref.: 771CEF

**UNIVERSAL KEY FOR SPHERO FLEX**
AND SPHERO BLOCK - NORMAL / MICRO
Hex 2.3 mm

Ref.: 760CBM

**HEX DRIVER**
FOR CONTRA-ANGLE TORQUE CONTROLLER

Ref.: 760CBR

**SCREW DRIVER FOR OT REVERSE**
THREADED SPHERE NORMAL
Hex 1.3 mm

## SPECIALTY ITEMS FOR IMPLANTS

Ref.: 008MBG

**CUFF HEIGHT MEASURING TOOL**
Kit contains:
- 1 CUFF HEIGHT SLIDER GAGUE
- 1 CUFF HEIGHT FIXED ROD GAGUE
- 1 SILICON RINGS DISPENSER
- 20 SILICON RINGS

Ref.: 680

**BROKEN SCREW EXTRACTOR KIT**
For removing broken screws from implants

Kit contains:
- 1 MANUAL CENTERING DEVICE
- 1 POSITIONER
- 1 CLAW REAMER BUR
- 1 REVERSE CUTTING BUR

Kit contains:
- 1 CLAW REAMER BUR
- 1 REVERSE CUTTING BUR

Ref.: 680FS **1 REVERSE CUTTING BUR**
Ref.: 680FL **1 FCLAW REAMER BUR**

## IMPLANTOLOGY

### ACCESSORIES FOR IMPLANTS

For information on abutments for other implant systems please contact Rhein83

Ref.: 108CV

Screw Vent Castable Abutment
Non-Rotating with titanium screw
White - Precision Hex
3.5 mm diameter

Ref.: 108AVB

Screw Vent Castable Abutment
Non-Rotating with titanium screw
Red - Conical Hex For Bar Connections
3.5 mm diameter

Ref.: 108BRK

Branemark Castable Abutment
Rotating with titanium screw
3.75 mm - 4.0 mm diameter

Ref.: 108BRK-NR

Branemark Castable Abutment
Non-Rotating
with titanium screw
3.75 mm - 4.0 mm diameter

Ref.: 108PE

Pitt Easy Castable Abutment
Non-Rotating with titanium screw
3.25 mm - 3.75 mm - 4.0 mm diameter

Ref.: 108BFT

Straumann ITI Castable Abutment - Rotating
with titanium screw for bar connections

Ref.: 113BFT

Steel Transfer Abutment For Straumann ITI Implant
with titanium screw

Ref.: FA004

Steel Analog For Straumann ITI Implant

**Rhein83** manufacutres castable abutments and titanium screws for most implant systems. For implant systems that are not listed in this catalog, please contact **Rhein83** for additional information.

## A GLOBAL VISION WITH A COMMON TARGET

***Our mission is to offer to the professionals of the dental field, different quality solutions allowing to reach the patient's comfort and satisfaction regardless the different social and financial situations. This is possible to the precious support of our partners worldwide!***


***Rhein83 USA branch is active in the area since the year 2000 by supporting the distribution in the entire country including different areas in Latin America. Rhein83 USA is located in New Rochelle (few minutes away from NYC), taking care of developing an intense program of formation with courses dedicated to dentists and dental technicians. Courses will allow the attendants to have CTD's credits with speakers members of the "National Board for Certification in Dental Laboratory Technology, Inc":***

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MOD. D122 REV.13 del 14/02/2020