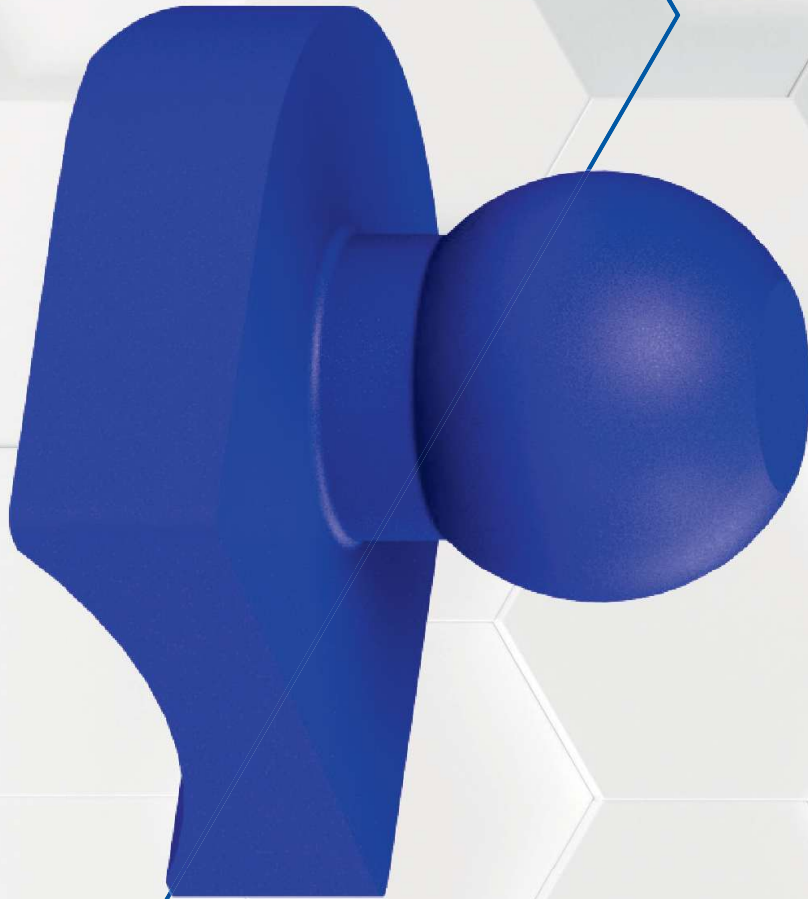




**HADER**  
SOLUTIONS



*Hader SX*

*Extracoronar*

**USER GUIDE**



[www.hader.eu](http://www.hader.eu)

# Manufacturing / Placement of male components

\* Please refer to the chapter "Manufacturing / placement of female components" for next steps.

## 1. Hader SX Extracoronar



Hader SX offers an efficient solution for sagittal attachments in cases with limited space. Available in two compact sizes: 1.7mm and 2.2mm, it provides flexibility and precision. Choose between a plastic male for traditional casting or a prefabricated NOPRAX male for the cast-on technique, offering versatility and ease of use for the dental technician.

### 1. Laboratory instructions

- 1- Choose the plastic or prefabricated male size. We recommend selecting the 2.2 mm option when space permits.
- 2- Wax up the crowns, making sure to create space to fit the plate of the male.
- 3- Determine the path of insertion of the prosthesis and use the paralleling mandrel (5031003) to incorporate the male to the wax up. Place the male as gingival as possible while leaving enough space for cleaning, and for NOPRAX males, make sure to fully incorporate the back plate to the wax-up.
- 4- Remove the paralleling mandrel and prepare for investing.
- 5- Plastic males: Cast in a hard alloy. Sandblast carefully ensuring not to damage the male.  
NOPRAX males: Cast in a non-precious alloy. Finish and polish carefully to avoid altering the dimensions of the male

#### Plastic castable male



SX 1.7:	6 PCS	5031008-6
	30 PCS	5031008-30
SX 2.2:	6 PCS	5031017-6
	30 PCS	5031017-30

Cast in hard alloys.

SX 1.7: Base Ø: 3 mm - Ball Ø: 1.7 mm  
SX 2.2: Base Ø: 4 mm - Ball Ø: 2.2 mm



#### NOPRAX male



SX 1.7:	6 PCS	5031008-6
	30 PCS	5031008-30
SX 2.2:	6 PCS	5031017-6
	30 PCS	5031017-30

Cast-on with non-precious alloys.

SX 1.7: Base Ø: 2.8 mm - Ball Ø: 1.7mm  
SX 2.2: Base Ø: 3.8 mm - Ball Ø: 2.2mm



### 2. Chairside instructions

- 1- Try the construction in the mouth and ensure fit.
- 2- Take a pick-up impression and send back to the laboratory.
- 3- When the final prosthesis is received. Cement the crowns according to the recommendations of the bonding agent manufacturer. Clean any excess of bonding material.

#### ALSO AVAILABLE FOR



# CAD CAM

It's time to unlock the full potential of digital dentistry with the Hader Digital Library. Visit our website [www.hader.eu](http://www.hader.eu), or **scan the QR code** to download the Digital Library today, and take your dental practice to new heights.



# Manufacturing / Placement of female components

## 1. New Construction

### 1. Laboratory instructions

#### *Female in frame*

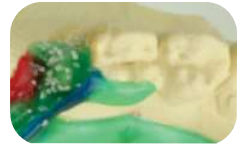
Instructions to manufacture a prosthesis using Hader SX females in a custom-made metal framework.

- 1- Pour a model from the pick-up impression.
- 2- Place a duplicating dummy over each male and make sure they are parallel to each other. Choose the dummy that matches the size of the male, 1.7mm (ref- 5031007) or 2.2mm (ref- 5031016).



- 3- Block all undercuts with wax and pour a refractory model.

4- Wax-up the framework. Cast and sandblast carefully to avoid damaging the space for the female. We recommend using glass beads for this purpose. Polish thoroughly.



- 5- Insert the dummy inside the space in the metal frame with the Hader SX insertion tool (ref- 5031010) and process the acrylic resin.
- 6- Finish and polish the prosthesis.



- 7- Replace the processing dummy for the appropriate plastic insert. We recommend using the yellow one for standard retention: 1.7mm (ref- 5031004), 2.2mm (ref- 5031013), for new prosthesis.



#### *Female in housing*

Instructions to manufacture a prosthesis using Hader SX females into the prefabricated housing. The Hader SX metal housing is available in 1.7mm (ref- 5031011) and 2.2mm (ref- 5031021).

- 1- After a pick-up impression is received, use the Hader SX insertion tool (ref- 5031010) to insert a processing dummy into the housing. Choose the dummy that matches the size of the housing, 1.7mm (ref- 5031007) or 2.2mm (ref- 5031016).
- 2- Seat the previous assembly on each male ensuring they are parallel. Block any undercuts and prepare for duplication.
- 3- Wax-up the framework. Leave enough space to incorporate the housing into acrylic resin. The housing can also be laser welded.
- 4- Cast and finish the framework. Send for try-in.
- 5- Place the framework and the assembly of housing and male in the model and process the acrylic resin following the recommendations of the manufacturer.
- 6- Finish and polish the prosthesis.
- 7- Replace the processing dummy for the appropriate insert. We recommend using the yellow one for standard retention: 1.7mm (ref- 5031004), 2.2mm (ref- 5031013).

### 2. Chairside instructions

- 1- Try-in and ensure the retention is optimal. If necessary, adapt the retention by replacing the female insert.

## 2. Existing Attachment

Instructions to manufacture and service a prosthesis over existing Hader SX attachments.

#### *New denture*

- 1- Identify the size of the male and place the appropriate Hader SX analog in the impression, 1.7mm (ref- 5031012) or 2.2mm (ref- 5031022).
- 2- Pour the stone model
- 3- Continue with steps 2 to 7 of "female in housing" or "female in frame" sections.

#### *Replacing females*

Choose between three levels of retention and two sizes:  
Yellow for standard retention: 1.7mm (ref- 5031004), 2.2mm (ref- 5031013)  
White for reduced retention: 1.7mm (ref- 5031005), 2.2mm (ref- 5031014)  
Red for increased retention: 1.7mm (ref- 5031006), 2.2mm (ref- 5031015)

- 1- Remove the plastic insert to replace with a pointed instrument.
- 2- Insert the new plastic inserts with the Hader SX insertion tool (ref- 5031010).
- 3- Seat the prosthesis and ensure the fit is correct and the retention is appropriate.



#### *Relining*

### 1. Chairside instructions

- 1- Apply soft wax under the attachments in the mouth to block them out.
- 2- In prosthesis of distal end, apply a small amount of self-curing acrylic in the retromolar pad area to create a stop.
- 3- Seat the prosthesis and bring the patient jaws to centric relation while the acrylic cures.
- 4- Prepare the impression material, apply it to the prosthesis and take impression ensuring that the attachments snap in correctly.

### 2. Laboratory instructions

- 1- Clean the female from any impression material.
- 2- Place the Hader SX analog 1.7mm (ref- 5031012) or 2.2mm (ref- 5031022) into the female in the prosthesis. Protect with wax any sensible area around the female.
- 4- Pour the model as usual. It is recommended to use a reline jig or flask.
- 5- Reline ensuring that the acrylic does not flow into the attachments area.
- 6- Finish and polish. Replace the plastic inserts if necessary.

## Available Kits



5033001  
**Hader SX Starter Kit Plastic Male**  
 Starter kit with all the tools and female inserts 1.7 and 2.2 in all colours. With plastic males.



5033002  
**Hader SX Starter Kit Cast-to Metal Male**  
 Starter kit with all the tools and female inserts 1.7 and 2.2 in all colours. With NOPRAX males.



**Hader SX Complete Plastic with Housing**  
 1.7 - 5032001  
 2.2 - 5032003



**Hader SX Complete Metal with Housing**  
 1.7 - 5032005  
 2.2 - 5032007



**Hader SX 2.2 Complete CAD-CAM**  
 2.2 - 5032012



**Hader SX Complete Plastic**  
 1.7 - 5032002  
 2.2 - 5032004



**Hader SX Complete Metal**  
 1.7 - 5032006  
 2.2 - 5032008



**Hader SX 2.2 Complete with Housing CAD-CAM**  
 2.2 - 5032011

## General Recommendations

- Any element which is visibly altered or damaged (corrosion, breakage, cracks) must be immediately disposed.
- Products made from plastic through injection moulding may exhibit a slight change in coloration, but this does not affect their quality or characteristics.
- The plastic inserts might wear after prolonged use, and it will be necessary to replace them regularly (max every 5 years) to maintain sufficient retention force.
- When replacing a plastic insert, all the elements, as well as the maintenance of the sealed parts, must be checked.
- Handle with care to avoid aspiration or ingestion by the patient.

## Alloys and Materials

- TITANAX: White - Ti 90 - Al 6 - V 4 / Melting range: 1663-1682 °C
- NOPRAX: White - Cr 28 - Co (balance) - Mo 6 - others: Si, Mn / Melting range: 1355-1450 °C
- POLYACETAL: Plastic Inserts

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