Stratos 200

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2.6 Non-slip base
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4.2 Centric rubber band
4.3 Centric rubber band holder
5.1 Protrusion insert (exchangeable)
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7.1 Holding device for incline support holder
7.2 Incline support holder
8.0 Articulator number
9.0 Protrusion screw
9.1 Protrusion screw thread
9.2 Protrusion screw spring
10.0 ISS screw
10.1 ISS screw thread
11.0 Opening stop
33 Retentive base block
## Accessories for the Stratos 200

### Protrusion inserts
- 20 15°
- 21 20°
- 22 25°
- 23 35°
- 24 40°
- 25 45°
- 26 60°

### Bennett inserts
- 27 15°

### Incisal plates
- 30 15° incisal plate made of plastic
- 31 30° incisal plate made of plastic
- 32 Incisal plate made of MMA-soluble material for personalized anterior guidance

### Other accessories
- 33 Retentive base block
- 34 Plaster protection plate
- 35 Magnetic base block
- 36 Collar
- 37 Retention disk
### Accessories for average model transfer

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>Instrument carrier for horizontal guide set-up table, 2-D setting-up template and bite fork support</td>
</tr>
<tr>
<td>41</td>
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</tr>
<tr>
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</tr>
<tr>
<td>42</td>
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</tr>
<tr>
<td>43</td>
<td>Set-up table</td>
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</table>

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<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
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<tr>
<td>50</td>
<td>Plane indicator</td>
</tr>
<tr>
<td>51</td>
<td>Bite fork support</td>
</tr>
<tr>
<td>52</td>
<td>Registration joint holder (CP)</td>
</tr>
<tr>
<td>53</td>
<td>3-D setting-up template</td>
</tr>
<tr>
<td>54</td>
<td>FH registration joint holder</td>
</tr>
<tr>
<td>60</td>
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</tr>
<tr>
<td>61</td>
<td>UTS transferbow system</td>
</tr>
</tbody>
</table>
1. Introduction / Signs and Symbols

1.1 Preface

Dear Customer,

Thank you for having purchased the Stratos 200 articulator. The Stratos 200 is an advanced technology product that is characterized by high quality and precision.

The Stratos 200 has been designed according to the latest industry standards. Inappropriate use may be hazardous. Please observe the relevant safety instructions and do read the Operating Instructions carefully.

We wish you much success and satisfaction with the Stratos 200.

1.2 Signs and symbols

The signs and symbols in these Operating Instructions facilitate the finding of important information. They have the following meanings:

- ! Risks and dangers
- i Important information
- W Contraindication

1.3 Information on the Operating Instructions

These Instructions apply to the following apparatus:

- Stratos 200, as of Serial Number 10,000
- Target group: dentists, dental technicians, dental lab professionals

These Operating Instructions facilitate the correct, safe and economic use of the Stratos 200 articulator.

If you have lost the Operating Instructions, you may order an extra copy at a nominal fee from your local Ivoclar Vivadent Service Center.
2. Safety First

This chapter is particularly important for staff who work with the apparatus or who have to carry out maintenance or repair work.

2.1 Field of application

- The Stratos 200 must only be used for the indications stipulated in Chapter 3. Further instructions to assure the proper use of the Stratos 200 articulator are as follows:
  - The instructions, regulations and notes in these Operating Instructions must be observed.
  - The unit must be properly maintained (See chapter 7).

3. Product Description

3.1 Functional description

The Stratos 200 is an adjustable articulator built according to the Camper’s plane (CP). It is fully coordinated with the Ivoclar Vivadent Biofunctional Prosthetic System (BPS). Consequently, the articulator facilitates the easy and effective application of a prosthetic system that has been successful for many years. Given the exchangeable protrusion and Bennett joint inserts, the Stratos 200 is adaptable to future developments. Additionally, users can choose to work with either a fixed or swivel axis.

Furthermore, a retrusion movement of 35° as well as an ‘immediate side shift’ are integrated in the Stratos 200. A newly developed activable centric locking system permits the articulator to be set to precise, reproducible initial set positions and facilitates separation and setting of the upper and lower frames. Even when the centric lock is open, the upper and lower frames are still connected. Only after removing the centric rubber bands from their retainers can the two parts be separated. The locating holes for transferbows, automatic centric return and a non-slip base are all standard equipment. In addition, the Stratos 200 features a dirt-and-wear-resistant finish. A wide range of accessories permit the Stratos 200 to meet the specific needs and requirements of every user.

3.2 Indication and contraindication

Indication

The articulator is suitable for the spatial fixation of models for dental reconstructions. The basic equipment permits the simulation of average movements of the human temporomandibular joint.

Contraindication

No contraindications are known to date provided that the articulator is used strictly according to the Operating Instructions.
4. Installation and Initial Start-up

4.1 Unpacking and checking the contents

Remove the components of the Stratos 200 from their packaging and check the delivery for completeness.

**Stratos 200 basic model**
- 1x Stratos 200
- 2x Protrusion inserts 30°
- 2x Protrusion inserts 30° for the fixed axis
- 2x Bennett inserts 30°
- 1x Incisal plate 0°
- 1x Incisal indicator
- 2x Retentive base blocks
- 1x Plaster protection plate
- 1x Incline support holder

If certain parts are missing or damaged, contact your local Ivoclar Vivadent Customer Service. We recommend keeping the original packaging for possible future transportation purposes.

4.2 Assembly and initial set-up

Insert the incline support holder (7.2) into the holding device (7.1) for the incline support holder. If necessary, the incline support holder can be removed from the apparatus.

Secure the base block (33) to the articulator by means of the G-I knurled screw (2.1).

**Incline support**

The incline support holder enables ergonomic handling of the articulator. If mounted, it maintains the articulator at approx. a 45° angle. This position permits a superb overview of the model mounted in the articulator.

4.3 Joint inserts (Protusion and Bennett inserts)

The joint inserts delivered with the basic model can be exchanged as necessary (see list of accessories).

**Procedure**

The Bennett inserts can be removed and exchanged by loosening the B-knurled screw (3.2).

The B-knurled screw can be completely removed from the Bennett element.

The corresponding positioning of the P-knurled screw (5.2) permits the exchange of the protrusion inserts (5.1).
5. Handling and Operation

5.1 Centric position

The Stratos 200 features a precise centric locking system that can be activated in the following three positions:

5.1.1 Centric fixation lock (4.1) open

This position permits the simulation of jaw movements.

If the centric rubber bands (4.2) are removed, the two frames can be separated.

5.1.2 Centric fixation lock (4.1) closed

In this position, the two frames of the Stratos 200 can no longer be separated and the articulator is fixed in the centric position. The centric fixation can be opened by applying slight pressure. This greatly facilitates handling for the user.

5.1.3 Centric fixation (4.1) locked

To lock the centric fixation completely, e.g. if the articulator has to be transported, or if no movements are desired, pull the joint axis into the precisely defined, final position.

Loosen the centric fixation before carrying out masticatory movements.
5.2 Protrusion movement

5.2.1 Protrusive movements can be simulated if the centric fixation (4.1) is open, according to the schematic below. The angle of the protrusion path can be adjusted to be more acute or flat (0-60°) by exchanging the corresponding protrusion inserts.

5.2.2 Protrusion screw (9.0) for centric shift
The protrusion screw permits each condyle to be incrementally advanced into a protrusive position (See diagram).

Important
In this case, the centric fixation must not be used.

5.3 Lateral and Bennett movement

5.3.1 Lateral and Bennett movements
The lateral movements can be simulated when the centric fixation (4.1) is open, according to the schematic below. To effect this movement, press with your thumb unilaterally on the joint of the corresponding side. The angle can be adjusted to be more acute or flat (15° or 30°) by exchanging the Bennett inserts.
5.4 Immediate side-shift movement
The Bennett inserts (3.1) can be moved to the required position after loosening the B-knurled screw (3.2). This permits an immediate side shift. The ISS screw (10.0) permits the exact fixation of the immediate side-shift movement.
1 turn = 0.5 mm.

5.5 Retrusion movement
To simulate retrusive movements, the centric fixation lock (4.1) must be open and the Bennett inserts (3.1) removed. This allows retrusive movements to be carried out properly.
6. Model Orientation in The Stratos 200

6.1 Average model orientation of dentulous and edentulous cases with a rubber band

6.1.1 Return articulator to the initial set position

- Check if Bennett inserts (3.1) are secured in place.
- Mount centric rubber bands (4.2).
- Bring centric fixation lock (4.1) into the upper position and secure in place.
- Secure incisal guide rod (1.2) in the initial position (red mark 1.6) of the guide rod holder.

6.1.2 Incisal indicator (1.3)

Slide the incisal indicator completely into the incisal guide rod (1.2).

Insert the longer part of the incisal indicator (1.3) into the upper hole (1.8) of the incisal guide rod (note notch in the rod).

6.1.3 Next, attach the thin rubber band to the incline supports (2.4), notches (2.5), and under the longer part of the incisal indicator (1.3).

6.1.4 Adjust occlusal plane according to the rubber band. Adjust mesial contact area either between the mandibular central incisors or on the wax bite block, according to the tip of the incisal indicator (1.3).

Example: edentulous case

6.1.5 For best results, mount mandibular model on modelling material and adjust. After that, cast maxillary model.

Example: dentulous case
6.2 Average orientation of dentulous cases with the set-up table

6.2.1 Return the articulator to the initial set position
- See page 34 for description
  Remove the incisal indicator (1.3).

6.2.2 Mount instrument carrier to the upper frame (2.3) and fasten it with the G-I knurled screw (2.1).

6.2.3 Insert set-up table completely into the instrument carrier and secure it.

6.2.4 Place articulator with the upper frame (2.3) facing down on the table. Orientate the dentulous mandibular model according to the mesial contact area and symmetry in the molar region. If necessary, use modelling material to hold it in place.

6.2.5 Apply plaster on model and base block and close articulator slowly.

6.2.6 Then, orientate maxillary model in the usual manner.

6.3 Average orientation of edentulous cases with the horizontal guide

6.3.1 Return articulator to the initial set position
- See page 34 for description
  Remove incisal indicator (1.3).

6.3.2 Mark and bisect the Trigonum retromolare on the mandibular model.

Bisect the distance between the upper and lower mucolabial folds and set the symphysis fork (41.1) of the horizontal plane on the resulting value.

Using the resulting values, orientate mandibular model to the horizontal guide and hold it in place, e.g. with a rubber band.

6.3.3 Mount instrument carrier (40) to the upper frame (2.3).

Fasten horizontal guide in place by means of the knurled screw of the instrument carrier.

6.3.4 Next, orientate maxillary model as usual.
6.4 Average orientation of dentulous cases with the horizontal guide

6.4.1 Return articulator to the initial set position
- See page 34 for description
Remove the incisal indicator (1.3).

6.4.2 Transfer maxillary mesial contact area vertically to the mandibular model. Mark the tips of both distobuccal cusps of the lower second molars. If these molars are missing, the first molars may be used instead.
- Put mandibular mesial contact area behind the incisal tip of the symphysis fork.
- Adjust horizontal guide in such a way that the rear edges barely cover the marked cusps of the second molars and establish symmetry.
- The retromolar pads are used as reference points for free-end surfaces, similarly to the Trigonum retromolare in edentulous cases.

Subsequently, attach horizontal guide to the model with e.g. wax or a rubber band.

6.4.3 Mount instrument carrier to the upper frame (2.3).
Fasten horizontal guide in place by means of the knurled screw of the instrument carrier.

After that, apply some plaster on the model and base block and close articulator slowly.

6.4.4 Next, orientate maxillary model as usual.

6.5 Personalized model transfer with the registration joint holder

6.5.1 Return articulator to the initial set position.
- See page 34 for description
Remove incisal indicator (1.2).

6.5.2 Mount the plane indicator (50) instead of the incisal guide rod (1.2).

6.5.3 Mount bite fork support (51) to the lower frame (2.2) by means of the instrument carrier (40).

6.5.4 Insert registration joint holder (52) instead of the incisal plate (1.1) and secure it.

6.5.5 Mount UTS registration to the registration joint holder and secure bite fork with the bite fork support.
Example: occlusal localizing tray
Example: UTS bite fork (dentulous case)
6.5.6. Mount maxillary model to the bite fork and cast. Close articulator until the plane indicator lies on the registration joint holder.

Example: UTS bite fork (edentulous case)

F4H registration joint holder (54)
The procedure is the same as with the CP registration joint holder. The plane indicator (50) lies on the relevant support.

6.5.7 Subsequently, orientate mandibular model in the usual manner.

6.6 Personalized model transfer with the UTS transferbow

6.6.1 Return articulator to the initial set position.
• See page 34 for description.
Remove incisal indicator (1.2).

6.6.2 Mount the plane indicator (50) instead of the incisal guide rod (1.2).

6.6.3 Mount bite fork support to the lower frame (2.2) by means of the instrument carrier.

6.6.4 • Remove glabellar rest from the transferbow and insert support pins (Type II) (60) from above.
• Insert the UTS into the locating holes for transferbows (6.1).
• Using the support pins, adjust the transferbow so that it is parallel to the table top.
• Finally, secure bite fork with the bite fork support.

6.6.5 Mount maxillary model to the bite fork and cast. Close the articulator until the plane indicator rests in the notch in the cross-beam of the support pin.

If Type-I support pins are used, close articulator until the plane indicator touches the SME indicator of the transferbow.

6.6.6 Then, orientate mandibular model in the usual manner.
6.7 Personalized setup of anterior guidance

For the fabrication of personalized incisal plates, Ivoclar Vivadent offers a special transparent incisal plate. The plate is made of a MMA-soluble plastic that bonds with the set-up resin (SR Ivolen). Anterior guidance plates thus fabricated can always be exactly repositioned in the Stratos 200.

Procedure

First, mount the transparent 0° incisal plate. Then, position the models of the patient for which the anterior guidance should be formed in the Stratos 200. Subsequently, mix appropriate resin and spread it on the incisal plate. Finally, simulate the registered masticatory movements (protrusion, retraction, laterotrusion) with the upper frame of the Stratos 200. The pattern of movements will thus be scratched into the resin by the incisal guide rod and recorded after polymerization of the resin.

The forming of the natural facing should be done from excursion to centric. Otherwise, the resin might be forced out of the incisal plate. Make sure that no vertical increase of occlusion occurs.
7. Maintenance and Cleaning

This chapter describes the user maintenance and cleaning procedures for the Stratos 200. Only those tasks that can be carried out by qualified dental lab experts are listed. All other tasks must be performed by qualified service personnel at a certified Ivoclar Vivadent Service Center.

7.1 Monitoring and maintenance

The time for these maintenance procedures depends on the frequency of use and the working habits of the user. For these reasons, the recommended times are only approximates.

<table>
<thead>
<tr>
<th>What</th>
<th>Part</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check centric rubber band for damage and cracks</td>
<td>Centric rubber band</td>
<td>Every six months</td>
</tr>
<tr>
<td>Check if knurled screws are dirty</td>
<td>Knurled screw</td>
<td>Weekly</td>
</tr>
<tr>
<td>Check if joint bolt is sufficiently lubricated</td>
<td>Joint bolt</td>
<td>Monthly or as necessary</td>
</tr>
<tr>
<td>Check if incline support holder and holding device are dirty</td>
<td>Holding device for incline support holder</td>
<td>Weekly or as necessary</td>
</tr>
</tbody>
</table>

7.2. Cleaning

<table>
<thead>
<tr>
<th>What</th>
<th>Frequency</th>
<th>Cleaning agent/Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knurled screws contaminated with wax or plaster</td>
<td>Weekly or as necessary</td>
<td>Rinse with warm water</td>
</tr>
<tr>
<td>Joint bolt contaminated with dust</td>
<td>Weekly or as necessary</td>
<td>Rinse with warm water</td>
</tr>
</tbody>
</table>

Protect the Stratos 200 from acids and solvents (e.g. MMA) to prevent the finish from being damaged.
8. What If ...

This chapter will help you to recognize malfunctions and take appropriate measures, or, if possible, to perform some repairs.

8.1 Technical malfunctions

<table>
<thead>
<tr>
<th>Error</th>
<th>Cause/Description</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper frame exceeds opening stop and slips backwards.</td>
<td>The opening stop is not in place or defective.</td>
<td>Replace opening stop or mount it properly.</td>
</tr>
<tr>
<td>Articulator cannot be opened when the centric fixation lock is closed.</td>
<td>Centric fixation has been fixed too tightly.</td>
<td>Fix centric fixation less tightly.</td>
</tr>
<tr>
<td>Joint bolt is damaged or grooved.</td>
<td>The articulator was forcibly opened and closed with the centric fixation fixed, without the centric fixation being loosened.</td>
<td>Loosen centric fixation lock before opening and closing the articulator.</td>
</tr>
<tr>
<td>The surface of the articulator is damaged or etched.</td>
<td>Surface was cleaned with acid, solvent or lye.</td>
<td>Do not use acid, solvent or lye to clean the apparatus.</td>
</tr>
<tr>
<td>The surface of the apparatus is scratched or damaged.</td>
<td>Surface was scratched with a sharp instrument.</td>
<td>Do not scratch the surface with a sharp instrument.</td>
</tr>
</tbody>
</table>

8.2 Repairs

Repairs may only be carried out by a certified Ivoclar Service Center. Please refer to the addresses mentioned in Chapter 10. If repairs during the warranty period are not carried out by a certified Ivoclar Vivadent Service Center, the warranty will expire immediately.
9. Product Specifications

9.1. Delivery form

Stratos 200 basic model
1 Stratos 200
2 Protrusion inserts 30°
2 Protrusion inserts for the fixed axis
2 Bennett inserts 30°
1 Incisal plate 0°
1 Incisal indicator
2 Retentive base blocks
1 Plaster protection plate
1 Incline support holder

“Average” Accessories Assortment
• 1 Instrument carrier
• 1 Setup table
• 1 Horizontal guide
• 1 2-D setting-up template

“Personalized” Accessories Assortment
• 1 Complete set of joint inserts
• 2 x 1 Incisal plate 15° and 30°, as well as
  1 personalized plate
• 1 Instrument carrier
• 1 Plane indicator
• 1 Registration joint holder
• 1 Bite fork support

Joint inserts
Complete assortment with the following angles:
• Protrusion inserts 15°, 20°, 25°, 35°, 40°, 45°, 60°; two
  inserts of each angle
• Bennett inserts 15°, two inserts

The various angles of the inserts are also available in pairs:
• Protrusion inserts 15°, 20°, 25°, 30° open, 30° closed, 35°,
  40°, 45°, 60°
• Bennett inserts 15°

Separately available:
• Incisal plate 15° or 30°
• Incisal plate for personalized anterior guidance, package of
  5 plates
• Instrument carrier
• Plane indicator
• Horizontal guide
• 2-D setting-up template
• 3-D setting-up template
• Setup table
• Adjustable support pins (Type II)
• Registration joint holder
• Bite fork support
• Magnetic base blocks, package of 2 or 10 blocks
• Retentive base blocks, package of 10 or 50 blocks
• Plaster protection plate, package of 5 plates
• FH registration joint holder
• Incline support holder
• Retention disk for magnetic base block

Colour code
All exchangeable parts with an angle indication are colour-coded.
• white 0°
• red 15°
• orange 20°
• brown 25°
• black 30°
• grey 35°
• green 40°
• blue 45°
• yellow 60°
• transparent for personalized anterior guidance

The delivery forms may vary from country to country.
9.2 Technical data

- Bonwill triangle 108 mm
- Balkwill angle 15°
- Working height 118 mm
- Retrusion path angle 33°
- Protrusion screw 0-4 mm
- Protrusion angle: 30°. Other angles are available as accessories.
- Exchangeable, colour-coded 30° protrusion inserts, for a fixed or swivel axis
- Exchangeable, colour-coded 30° Bennett inserts. Other angles are available as accessories
- Exchangeable, colour-coded 0° incisal plates. Other angles are available as accessories.
- Weight: 950 g
- Colour: apricot/white (RAL 1017, RAL 9016)

10.1 Tips on the coordination of articulators

The companies below offer split-cast systems for the Stratos 200. These systems permit users to coordinate their Stratos 200 articulators. For further information, please contact:

- Adesso-split
  Baumann Dental GmbH
  Senderstrasse 5
  D-75417 Mühlacker

- Quicksplit
  Hans-Rossner & Sohn GmbH
  Dentaltechnik
  Ulmerstrasse 11
  D-87700 Memmingen

Please note that the standard accessories can no longer be used after the apparatus have been coordinated.

This apparatus has been developed for use in dentistry. Setup and operation should be carried out strictly according to the Operating Instructions. Liability cannot be accepted for damages resulting from misuse or failure to observe the Instructions. The user is solely responsible for testing the apparatus for its suitability for any purpose not explicitly stated in the Instructions. Descriptions and data constitute no warranty of attributes and are not binding.