USER INSTRUCTIONS

CDS® ALIGNMENT SET

albrecht®
FUNKTIONELLE REHABILITATION
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1. Introduction

1.1. Foreword
Dynamic spring-loaded orthoses can be used to treat hinge contractures caused by both neurological and orthopaedic conditions. The shortening of the tissue surrounding the hinge decreases the range of motion affecting the patient’s everyday life. Therefore, our CDS®-concept aims to increase the range of motion without pain by applying a constant, appropriate low load prolonged stretch (LLPS).

1.2. Customer information
For your own safety please read through these User Instructions carefully and accurately before using the hinge. The instructions, notes and procedures must be read and understood thoroughly in order to benefit from the correct operation and use of the device. If anything in the User Instructions is not clear, or any instructions, operating procedures or safety information is not fully understandable, please contact the appropriate specialist retailer or albrecht GmbH directly, before you use the hinge. This particularly applies to the safety instructions.

1.3. Application
The CDS® Alignment Set is to be used exclusively for the processing of CDS® Hinges.

1.4. Declaration of conformity

1.5. Safety instructions
The optimal effect of the CDS® Alignment Set is only achieved when used correctly.

The standard safety instructions for orthopaedic workshops apply, particularly the protection of the eyes, the hearing and the airways.

Ensure the respective insulation in particular of the screws and axes. For this purpose, the respective components may be protected with silicone spray and/or silicone compound.

1.6. Warranty
We assume the warranty for the hinge for a period of 3 months. The CDS® Alignment Set is a medical rehabilitation device and must not be used for any purpose other than the intended, as described in the User Instructions. Changes to the CDS® Alignment Set or other applications require the written consent of the albrecht GmbH.

If this is not obtained, the manufacturer may not honor the guarantee. If you are using a single part or other components, these should be used as intended. If changes or modifications (e.g. additional mounting holes) are made to the individual parts or components, the manufacturer’s warranty no longer applies. The removal of or damage to the QM seal will also void the warranty.
1.7. Scope of delivery

Please check the CDS® Alignment Set for completeness upon its receipt.

- 4x lamination plate short (k): 88,5mm Width: 16mm, 20mm, 24mm / 3mm
  ![4x lamination plate short](image)

- 2x lamination plate long: 104,5mm Width: 16mm, 20mm, 24mm / 3mm
  ![2x lamination plate long](image)

- 4x lamination plate short (k): 67mm CDS® Nano: 16mm / 2mm
  ![4x lamination plate short](image)

- 4x lamination plate long: 72mm CDS® Nano: 16mm / 2mm
  ![4x lamination plate long](image)

- 4x spacer 20mm / 1mm
  ![4x spacer 20mm](image)

- 4x spacer 36mm / 1mm
  ![4x spacer 36mm](image)

- 4x spacer 28mm / 2mm
  ![4x spacer 28mm](image)

- 4x spacer 28mm / 3mm
  ![4x spacer 28mm](image)

- 4x centring pin
  ![4x centring pin](image)

- 4x double threaded pin
  ![4x double threaded pin](image)

- 4x centring ring CDS® Nano 2mm
  ![4x centring ring](image)

- 4x centring ring
  ![4x centring ring](image)

- 2x lamination tube
  ![2x lamination tube](image)

- 2x threaded rod with 4 nuts
  ![2x threaded rod with 4 nuts](image)

- 4x retaining washer
  ![4x retaining washer](image)

- 4x retaining washer CDS® Nano
  ![4x retaining washer CDS® Nano](image)

- 8 x screw M5
  ![8 x screw M5](image)

- Drills: HSS/E 3,2mm, HSS/E 4,2mm
  ![Drills: HSS/E 3,2mm, HSS/E 4,2mm](image)

- Tools: 2,5mm Inbus, 3mm Inbus, face spanner

**Optional:**
Set of spare parts CDS® Alignment Set
(2x lamination tube, 2x threaded rod),
Art.No.: 860-180-S
Drill HSS/E 3,2mm, Art.No.: 280-076-S
Drill HSS/E 4,2mm, Art.No.: 280-077-S
2. Assembly of the lamination tubes in the plaster model

Position the lamination tube in the plaster negative on the desired hinge axes. If needed, the lamination tube (set of spare parts for alignment set 860-180-S) can be re-ordered.
3. Aligning the hinge and runners

To achieve perfect parallelism between the hinges and runners, these must be inserted into the lamination tube in the plaster positive for alignment with the mounted centring pin (on the hinge or alignment set). To align the hinge rods when using adapter hinges, these must be screwed with the spacers of the alignment set using the screwing strap.

During contouring, ensure that you do not bend the areas of hinges, covers, place holders or within the screwing of the lamination anchor and that there is sufficient space at the pivot point of the runner as otherwise the hinges may be damaged or broken.

When working with steel hinges:

Our stainless steel hinge rods are made of high-quality, stable material. For drilling bores we recommend:

- the use of a bench and upright drilling machine
- a metal drill bit as sharp as possible (HSS/E)
- a speed of about 400-600 rpm

Drilling in (chip-breaking) intervals increases the service life of the drill.
4. Assembly on the plaster model

For a firm placement on the plaster positive, the centring pins must be fixed with the threaded rod.

Please note that the threaded rod may be screwed at most 1cm deep into the centring pin.
5. CDS® Hinges (rigid)

5.1. CDS® Hinge 90° plus/ CDS® Hinge 90°

5.1.1. Assembly of the centring pin on the CDS® Hinge 90° plus / CDS® Hinge 90°

Remove the central screw using the supplied tool (face spanner).

**Do not move the hinge without the screws in place.**

Replace the central screw with the centring pin immediately after removing the central screw. To finish the assembly, immediately replace the centring pin with the central screw.
5.2. CDS® Hinge 360° plus / CDS® Hinge 360°

5.2.1. Assembly of the centring pin on the CDS® Hinge 360° plus / CDS® Hinge 360°

Remove the central screw using the supplied tool (face spanner).

**Do not move the hinge without the screws in place.**

Insert the centring ring into the lamination anchor. Immediately screw the centring pin onto the hinge. To finish the assembly, immediately replace the centring pin with the central screw.

When disassembling and assembling the lamination anchor

If you want to completely remove the lamination anchor from the hinge, secure the hinge with the central screw. **Do not move the hinge without the screws in place.** When you put the lamination anchor back in place, the hinge must immediately be secured again with the central screw or the centring pin.
5.3. CDS® Nano Hinge

5.3.1. Assembly of the centring pin on the CDS® Nano Hinge

Remove the central screw using the supplied tool (2.5mm Allen key).

Do not move the hinge without the screws in place.

Screw the double threaded pin into the centring pin. Then immediately screw the centring pin onto the hinge. To finish the assembly, immediately replace the centring pin with the central screw.

When disassembling and assembling the lamination anchor

If you want to completely remove the lamination anchor from the hinge, secure the hinge with the central screw. Do not move the hinge without the screws in place. When you put the lamination anchor back in place, the hinge must immediately be secured again with the central screw or the centring pin.
5.4. CDS® Runner / CDS® Nano Runner

5.4.1. Assembly of the CDS® Runner / CDS® Nano Runner in the alignment set

The CDS® Runner / CDS® Nano Runner must be mounted directly. It must be screwed with the centring pin and the corresponding retaining washer as shown in the exploded diagram. The Teflon washer must be removed during the casting process.
6. CDS® Adapter-Hinge / ROM Nano Hinge

6.1. CDS® Adapter-Hinge 90° plus

6.1.1. Assembly of the Alignment set for the CDS® Adapter-Hinge 90° plus

The lamination plates (short and long) serve as placeholders for the CDS® Adapter-Hinge 90° plus. The (short) lamination plate, the (long) lamination plate, the centring pin, the (2mm) spacer and the retaining washer must be screwed as shown in the exploded diagram. Ensure the correct orientation of the lamination plates. Use the 2mm spacer for the CDS® Adapter-Hinge 90° plus.
6.2. CDS® Adapter-Hinge 360° plus

6.2.1. Disassembly and assembly of the lamination anchor

Remove the central screw using the supplied tool (face spanner). Do not move the hinge without the screws in place. Using the supplied Allen key, loosen the Allen screws on the lamination anchor. Screw the central screw with the hinge immediately after removing the lamination anchor. Now the lamination anchor may be used for alignment with the alignment set.

When the contouring / casting work is finished, the lamination anchor must be screwed back onto the hinge. To do so, remove the central screw and place the anchor onto the hinge. Secure the anchor with the central screw and the two Allen screws in the desired position.
6.2.2. Assembly of the Alignment set for the CDS® Adapter-Hinge 360° plus

The (long) lamination plate and the lamination anchor serve as a place holder for the CDS® Adapter-Hinge 360° plus. Remove the lamination anchor from the hinge. The (long) lamination plate, the lamination anchor, the centring pin, the (2mm + 3mm) spacers and the retaining washer must be screwed as shown in the exploded diagram. Ensure the correct orientation of the lamination plate and the lamination anchor. Use the 2mm and 3mm spacers for the CDS® Adapter-Hinge 360° plus.
6.3. CDS® Adapter-Hinge 360°

6.3.1. Disassembly and assembly of the lamination anchor

Remove the central screw using the supplied tool (face spanner). **Do not move the hinge without the screws in place.** Using the supplied Allen key, loosen the Allen screws on the lamination anchor. Screw the central screw with the hinge immediately after removing the lamination anchor. Now the lamination anchor may be used for alignment with the alignment set.

When the contouring / casting work is finished, the lamination anchor must be screwed back onto the hinge. To do so, remove the central screw and place the anchor onto the hinge. Secure the anchor with the central screw and the two Allen screws in the desired position.
6.3.2. Assembly of the Alignment set for the CDS® Adapter-Hinge 360°

The (short) lamination plate and the lamination anchor serve as placeholders for the CDS® Adapter-Hinge 360°. Remove the lamination anchor from the hinge. The (short) lamination plate, the lamination anchor, the centring pin, the (3mm) spacers and the retaining washer must be screwed as shown in the exploded diagram. Ensure the correct orientation of the lamination plate and the lamination anchor. Use the 3mm washer for the CDS® Adapter-Hinge 360°.
6.4. CDS® Nano Adapter-Hinge

6.4.1. Disassembly and assembly of the lamination anchor

Remove the central screw using the supplied tool (2.5mm Allen key). **Do not move the hinge without the screws in place.** Screw the central screw with the hinge immediately after removing the lamination anchor. Now the lamination anchor may be used for alignment with the alignment set.

When the contouring / casting work is finished, the lamination anchor must be screwed back onto the hinge. To do so, remove the central screw and place the anchor onto the hinge. Secure the anchor with the central screw in the desired position.
6.4.2. Assembly of the Alignment set for the CDS® Nano Adapter-Hinge

The (short) lamination plate and the lamination anchor serve as placeholders for the CDS® Nano Adapter-Hinge. Remove the lamination anchor from the hinge. The (short) lamination plate, the lamination anchor, the centring pin, the (1mm) spacer and the corresponding retaining washer must be screwed as shown in the exploded diagram. Ensure the correct orientation of the lamination plate and the lamination anchor. Use the 1mm spacer for the CDS® Nano Adapter-Hinge.
6.5. ROM Nano Adapter-Hinge

6.5.1. Assembly of the Alignment set for the ROM Nano Adapter-Hinge

The (short and long) 2mm Nano lamination plates serve as placeholders for the ROM Nano Adapter-Hinge. The (long and short) lamination plates, the centring pin and the corresponding retaining washer must be screwed as shown in the exploded diagram. Ensure the correct orientation of the lamination plates.
6.6. CDS® Adapter-Runner / CDS® Nano Adapter-Runner

6.6.1. Assembly of the CDS® Adapter-Runner / CDS® Nano Adapter-Runner of the Alignment Set

The CDS® Adapter-Runner / CDS® Nano Adapter-Runner must be cast/mounted directly. It must be screwed with the centring pin and the retaining washer as shown in the exploded diagram. The Teflon washer must be removed during the casting process. Ensure the correct outward orientation of the threaded bushings. Ensure the correct orientation of the lamination plates / placeholders when using CDS® Nano Adapter-Runner.
7. Technical data CDS® Alignment Set

<table>
<thead>
<tr>
<th>Name</th>
<th>Art.-Nr.</th>
</tr>
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<tbody>
<tr>
<td>CDS® Alignment Set</td>
<td>860-100-S</td>
</tr>
<tr>
<td>Set of spare parts CDS® Alignment Set</td>
<td>860-180-S</td>
</tr>
</tbody>
</table>

8. Transfer of the hinges

The hinges are not intended for single use, but rather is intended for multiple use by a single person. We do not recommend transfer to other users. Should this be desired however, please ensure to pass on the care and cleaning instructions and have the hinges checked by an authorized specialist dealer for safe and proper operation.

9. Disposal

The CDS® Alignment Set contains recyclable materials without toxic or other harmful substances or other environmentally hazardous substances. Provided it is not contaminated with infectious germs, the hinge can be deposited in the normal waste disposal. To be sure, consult your specialist orthopaedics dealer.