

USER INSTRUCTIONS

CDS® WRIST BRACE EXTENSION

WRIST ORTHOSIS

DYNAMIC SPRING-LOADED WRIST ORTHOSIS



albrecht®
FUNKTIONELLE REHABILITATION

CDS® Wrist Brace Extension

User Instructions

Table of content

1. Introduction	4
1.1. Foreword	4
1.2. Customer information	4
1.3. Mode of operation	4
1.4. Application	4
1.5. Scope of delivery	4
1.6. Declaration of conformity	4
1.7. Features	5
1.8. Indications	5
1.9. Contraindications	5
1.10. Safety Instructions	6
1.11. Warranty	7
2. Adjustment by the orthopaedic technician	8
2.1. Fitting to the patient	8
2.1.1. Adjusting the brace to the arm shape by using an orthopaedic "bending iron"	9
2.1.2. Setting the shell components	10
2.1.3. Setting the position of the redression and limitation range	11
2.1.4. Setting the limitation	12
2.1.5. Inserting the stop wedge	13
2.1.6. Adjusting the finger plate	14
2.1.7. Optional disassembly of the thumb plate	15
2.1.8. Adjusting the palm plate	16

User Instructions

2.1.9. Optional additional length adjustment of the hand piece.....	17
2.2. Application of the brace by the orthopaedic technician	18
2.2.1. Deactivate the spring tension	18
2.2.2. Open the strap clips	19
2.2.3. Attaching the brace to the arm	20
2.2.4. Adjust strap lengths as necessary	21
2.2.5. Final adjustment.....	23
2.2.6. Activate the spring tension.....	23
2.2.7. Setting the spring tension to the intensity needed by the patient.....	24
2.2.8. Changing the spring tension.....	25
3. Handling by the patient	26
3.1. Removing the brace.....	26
3.2. Putting on the brace	28
4. Cleaning, maintenance and disinfection	31
4.1. Pads and straps.....	31
4.2. Rods (hinges).....	31
5. Technical data / material	32
6. Size chart and article numbers	32
7. Transfer of the brace	33
8. Disposal	33

CDS® Wrist Brace Extension

User Instructions

1. Introduction

1.1. Foreword

Dynamic spring-loaded orthoses can be used to treat joint contractures caused by both neurological and orthopaedic conditions. The shortening of the tissue surrounding the joint 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 brace. 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 brace. This particularly applies to the safety instructions.

1.3. Mode of operation

The CDS® Wrist Brace Extension functions accordingly to the CDS® principle and has been designed to treat an extension deficit of the wrist. The brace applies a dynamic low load prolonged stretch to stimulate growth in the contracted tissue. **The adjustable redression range protects the tissue from painful overstretching.**

1.4. Application

The brace has been designed exclusively for the orthotic treatment of the wrist joint and for contact with intact skin.

1.5. Scope of delivery

Please check the completeness of the brace at delivery.

- Brace with padding and straps
- albrecht GmbH hexagon key
- User Instructions
- Strap padding set

1.6. Declaration of conformity

The albrecht GmbH company, as the manufacturer solely responsible, declares that the CDS® Wrist Brace Extension conforms to the Regulation (EU) 2017/745 concerning medical devices.

User Instructions

1.7. Features

- Therapy in extension
- Individual adjustment of the spring tension
- Spring tension can be switched on and off without tools and without varying the set spring tension
- Redression range can be adjusted in 15° intervals
- Optimized shell- and strap system
- High wearing comfort thanks to air-permeable, light aluminium shell elements
- Adjustable angle of the handplates without tools
- High flexibility thanks to adjustable shell elements

1.8. Indications

The physician will prescribe the type of treatment to apply based on his or her diagnostic findings.

Generally, the use is indicated in:

- Joint contractures:
 - After surgery
 - After conservative treatment of capsular ligament injuries
 - Before and after joint replacement
 - In arthrosis and chronic polyarthritis
 - After burns
 - After strokes
 - After spinal cord injuries
 - Paralysis
 - After cranio-cerebral trauma (CCT)
- To prevent new contractures after arthrolysis

For all other indications a physician must be consulted.

1.9. Contraindications

- Bony obstruction, osteoporosis
thrombophlebitis

The brace is intended exclusively for contact with intact skin.

CDS® Wrist Brace Extension

User Instructions

1.10. Safety Instructions

The optimal effect of the brace is only achieved when used correctly.

- The brace must only be used in the intact, complete and mechanically undamaged condition and with complete and intact cushioning and walers. This must be verified by the user before each usage.
- Opening or removing one or more belts, as well as excessive loosening of the waler when using the brace leads to a reduction of the therapeutic effect of the brace and may lead to injury.
- The brace must not be worn over open wounds.
- The skin should be free of oils, grease, gels or other debris, to prevent reactions with the skin or the structure of the material.
- The orthosis should fit firmly but not too tight, so as not to restrict the blood circulation and adversely affect nerve and lymph vessels. Excessive compression is therefore to be avoided.
- Combination with other products is currently not provided for or is to be agreed with the manufacturer in writing.
- The brace is not intended for single use, but is intended for multiple use by a single person.
- The product as delivered is not sterile.
- Contact your physician immediately in the event of an allergic reaction.
- Please note that cushioned sections can heat up under direct sunlight. Protect the orthosis from direct sunlight if necessary.
- Currently there is no test for flammability. Exercise caution when using the orthosis in the direct vicinity of open flames such as lighters and cigarettes.
- The mechanical functions must only be adjusted using the supplied tools in order to avoid injuries and damage of the hinge.
- When adjusting the hinge rods to the shape of the extremity by using an orthopaedic bending iron, you must not bend the rods in the area of the hinge housing or the hinge cover as this could lead to damage or break of the hinge.

User Instructions

1.11. Warranty

In addition to the legal warranty, we provide a 6-month durability guarantee for the orthosis. If properly used, this guarantees that the orthosis will function without fault. This excludes the padding and straps, which are usually liable to a certain amount of wear and tear. This kind of wear and tear does not represent a product defect. This manufacturer's warranty is subject to the condition that the orthosis is used as a medical rehabilitation device and for no other purpose than that described in the instructions for use. Changes to the orthosis or the removal / damage to the quality management seal will invalidate the warranty.

CDS® Wrist Brace Extension

User Instructions

2. Adjustment by the orthopaedic technician

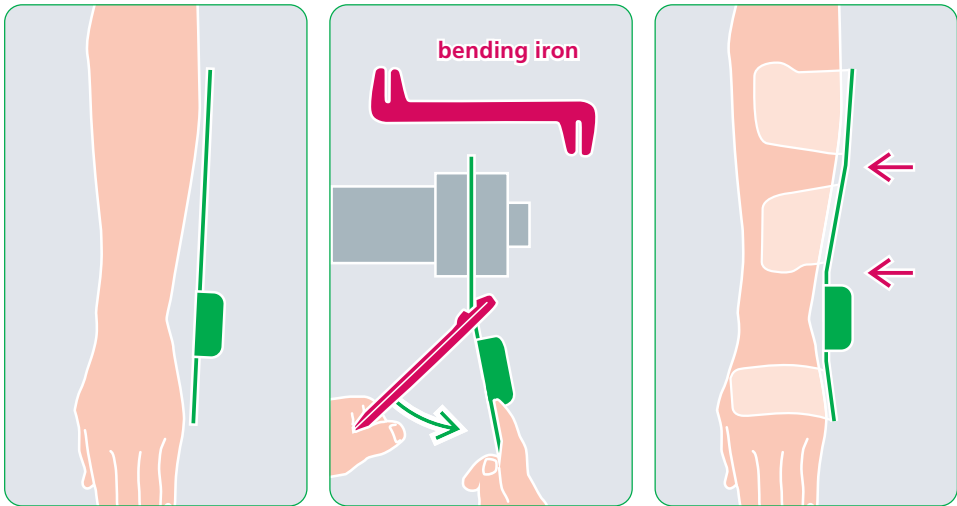
2.1. Fitting to the patient

- Our CDS® braces are constructed to be adjustable.
- The position of the shell components can be changed and they can be shaped.
- The hinge rods can be adapted to the shape of the extremity by using an orthopaedic bending iron.
- The strap lengths can be adjusted to different girths and shortened if necessary.

User Instructions

2.1.1. Adjusting the brace to the arm shape by using an orthopaedic “bending iron”

The brace is anatomically contoured. However, if a different shape is required, the hinge rod can be adjusted to the shape of the patient's forearm with the aid of an orthopaedic bending iron. Loosen the screws on the shell components and either move or remove them. Then adjust the hinge rod to the shape of the extremity.



When adjusting the hinge rod to the shape of the extremity by using an orthopaedic bending iron, you must not bend the rod in the area of the hinge housing or the hinge cover as this could lead to damage or break of the hinge.

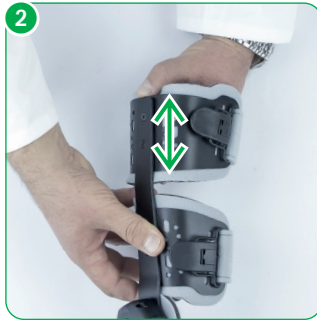
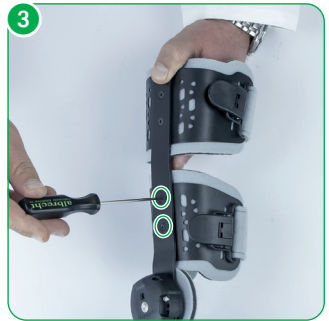
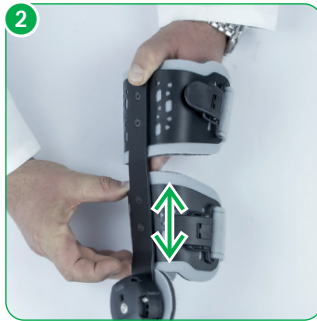
CDS® Wrist Brace Extension

User Instructions

2.1.2. Setting the shell components

The shell components are moveable.

- 1 Loosen the screws on the shell components with the supplied tool without unscrewing them completely.
- 2 Move the shell components into the desired position.
- 3 Tighten the screws again.



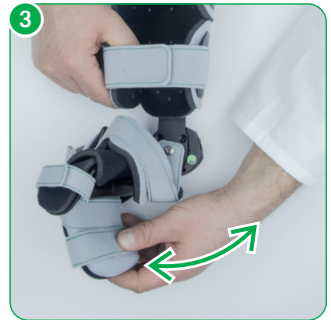
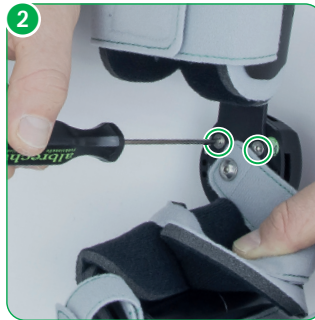
Please note that, because of its construction, the forearm leg shell in sizes M/M, S/S and the children's size consists of one shell component. **The shell components can be adjusted to the shape of the extremity.**

User Instructions

2.1.3. Setting the position of the redression and limitation range

The CDS[®] Wrist Brace Extension is constructed on the basis of a 360° hinge. In a 360° hinge, the position of the spring housing is adjustable in relation to the forearm hinge rod. The position of the redression and limitation range can be thereby altered and adjusted to the patient. That way, you can adjust the range of motion of the brace to the patient even if there are extreme motion deficits. The position of the stops depends on the position of the redression and limitation range.

- ❶ Remove the pad.
- ❷ Remove the two screws.
- ❸ You can adjust the position of the redression range in 15° steps. Use a goniometer to determine the desired position and adjust the hinge accordingly.
- ❹ Insert the screws again and tighten them.
- ❺ Insert the pad again.



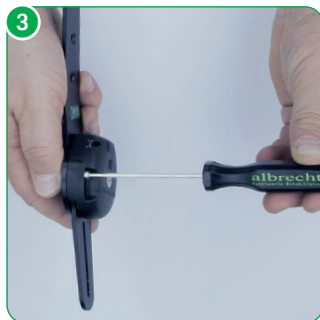
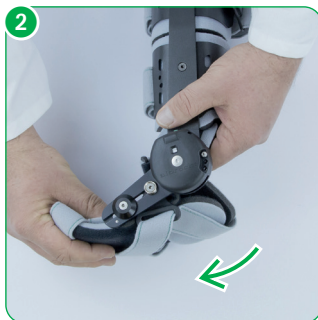
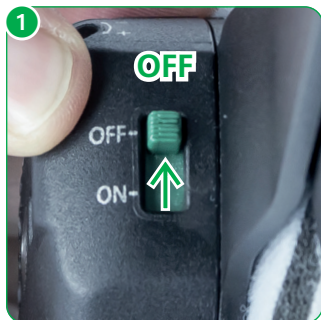
CDS® Wrist Brace Extension

User Instructions

2.1.4. Setting the limitation

The limitation restricts the range of motion. Extension and the redression range are limited by the stop screw. Before setting the extension limitation, you must deactivate the spring tension.

- 1 Turn the green switch to „off“.
- 2 Bring the brace into flexion.
- 3 There are three holes on the side of the CDS® housing. The number of degrees depends on the position of the straightening and limitation range and can be determined with a goniometer. The stop screw is located in one of the holes.
Then turn the stop screw with the supplied tool from the CDS® housing.



Before screwing it into one of the three holes, bring the brace into flexion, so that the holes are freely accessible. Position the stop screw in the desired position and tighten the screw. The limitation can be adjusted to the treatment progress with increasing mobility of the patient.

Please be aware that the brace must only be used with the stop screw positioned and tightened in one of the holes, otherwise the hinge will be damaged.

User Instructions

2.1.5. Inserting the stop wedge

Flexion can be limited with the stop wedge. Before adjusting the flexion limitation you must activate the spring tension.

Turn the green switch to „on“ and bring the brace into flexion until you feel a slight resistance that you have to overcome in order to activate the spring tension.

There are five positions on the side opposite the three holes. The number of degrees depends on the position of the redression and limitation range and can be determined with a goniometer. Insert the stop wedge in the desired position and fix it with the supplied screw.



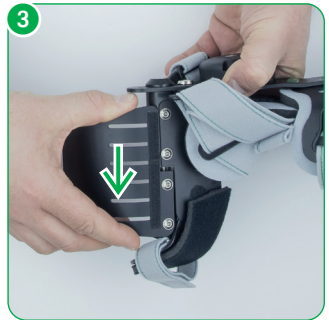
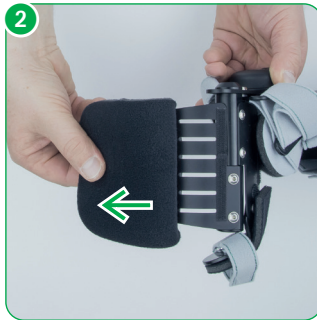
CDS® Wrist Brace Extension

User Instructions

2.1.6. Adjusting the finger plate

The finger plate can be adjusted in 15° steps.

- 1 Loosen the pad beneath the palm.
- 2 Remove the pad.
- 3 Pull apart the two elements of the palm plate.
- 4 While pressing on the finger plate, set the desired position.
- 5 Attach the pad again beneath the palm.



Beneath the pad are slits that can be used for finger fixation.

User Instructions

2.1.7. Optional disassembly of the thumb plate

The thumb plate can be removed if not needed. Loosen the two screws with the supplied tool and remove the thumb plate.



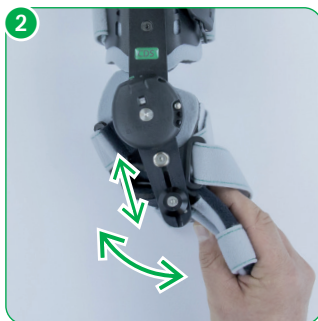
The thumb plate consists of PE material and is suitable for thermoforming.

CDS® Wrist Brace Extension

User Instructions

2.1.8. Adjusting the palm plate

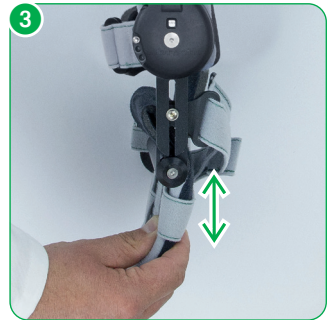
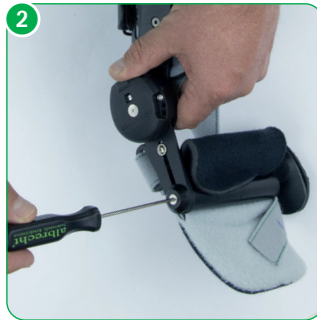
- 1 Loosen the screw in the fixing disk with the supplied tool.
- 2 Turn the palm plate into the desired position and position the retaining pin. Ensure that the retaining pin of the fixing disk clicks into the hole pattern of the retaining rod.
- 3 Then tighten the screws again.



User Instructions

2.1.9. Optional additional length adjustment of the hand piece

- ❶ Loosen the lock screw.
- ❷ Loosen the screw in the fixing disc with the supplied tool.
- ❸ Move the hand piece forward to the stop. Ensure that the retaining pin of the fixing disc clicks into the hole pattern of the retaining rod.
- ❹ Tighten the lock screw again.
- ❺ Tighten the screw in the fixing disk.



CDS® Wrist Brace Extension

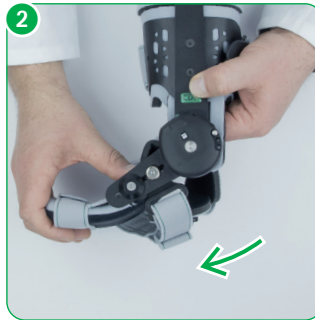
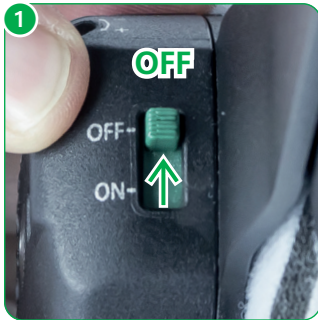
User Instructions

2.2. Application of the brace by the orthopaedic technician

2.2.1. Deactivate the spring tension

Before attaching the brace you must deactivate the spring tension.

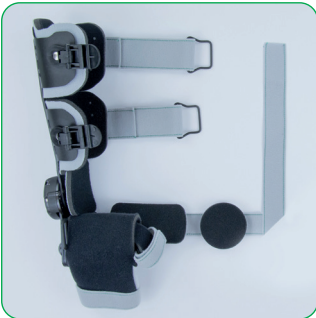
- 1 Turn the green switch to „off“.
- 2 Bring the brace as far into flexion as the patient is allowed to move. Now, the activation mechanism of the hinge is set to this position and the patient can reactivate the spring tension in this position.



User Instructions

2.2.2. Open the strap clips

To facilitate attaching of the brace on the patients, adjust the length of all brace straps to their maximum length without unthreading them. First loosen the finger strap. Then loosen the forearm straps by opening the clips.



CDS® Wrist Brace Extension

User Instructions

2.2.3. Attaching the brace to the arm

Let the patient put his hand in between the palm plate and the hand dorsum strap. Place the brace on the patient's forearm from the side.

Ensure that the pivot of the brace hinge matches the physiological pivot of the wrist.

It is possible for you to adjust the arm rod to the shape of the patient's lower arm by using an orthopaedic bending iron.

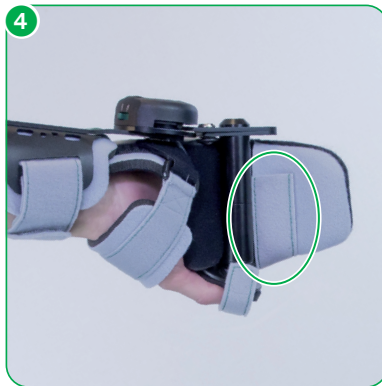
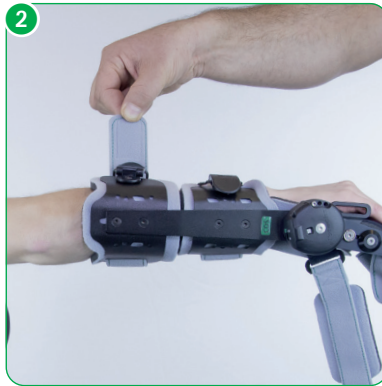
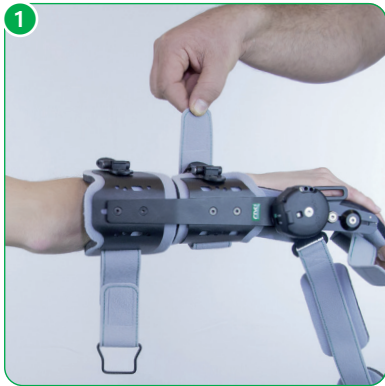


User Instructions

2.2.4. Adjust strap lengths as necessary

Adjust the straps to the desired length and shorten them if necessary containing the doublesided hook end.

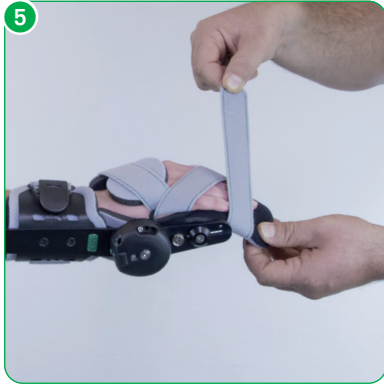
- ❶ First fasten the forearm strap next to the joint.
- ❷ Fasten the forearm strap further from the joint.
- ❸ Bring the hand dorsum strap around the wrist from below and thread the strap through the loop. Pull the hand dorsum strap diagonally over the hand.
- ❹ Fasten the hand dorsum strap underneath the finger plate.



CDS® Wrist Brace Extension

User Instructions

- 5 Fasten the finger strap underneath the finger plate.
- 6 Fasten the thumb strap.
- 7 Brace application complete.



Please note that, because of its construction, the strap runs in a V shape in sizes M/M and S/S.

If necessary, the additional strap padding supplied with the product can be attached under the straps.

User Instructions

2.2.5. Final adjustment

After fastening the individual straps, check that the straps are the correct length and that the brace is in the correct position and correct, if necessary. Ensure that the straps are not too tight so as not to interfere with the circulation.

The shell elements are anatomically contoured. You can also shape the shell elements with the hand to the forearm contour directly on the patient.

2.2.6. Activate the spring tension

- 1 To activate the spring tension, turn the green switch to „on“.
- 2 Bring the brace into flexion until you feel a slight resistance that you have to overcome in order to activate the spring tension.

The intensity of the spring tension is not altered by activation or deactivation of the spring tension.



CDS® Wrist Brace Extension

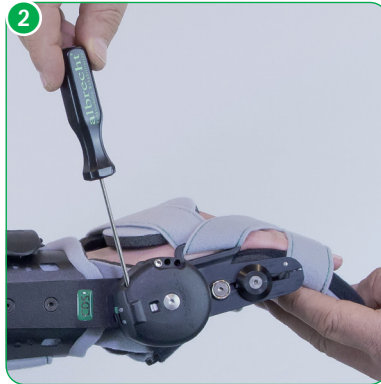
User Instructions

2.2.7. Setting the spring tension to the intensity needed by the patient

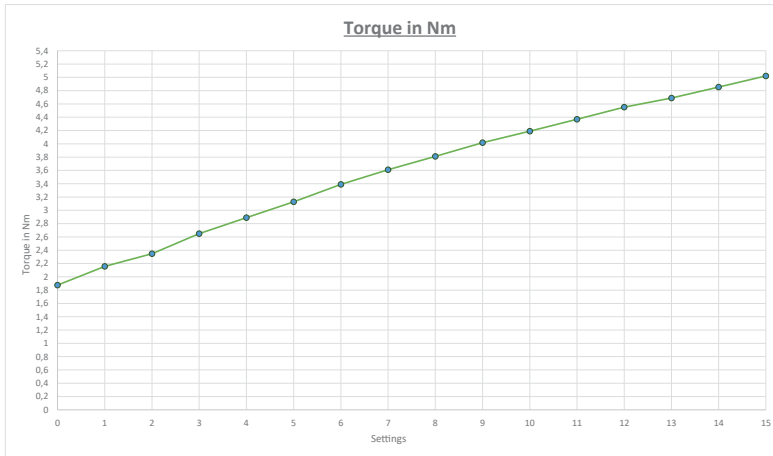
- 1 The spring tension setting is displayed on the CDS® housing by a scale from 0 to 15. The ranges above 15 and below 0 are marked in red.

To prevent damage to the CDS® hinge, the red range in the CDS® hinge window must be avoided.

- 2 Insert the tool as far as it will go into the side hole on the hinge. By turning clockwise or towards + the spring tension is increased and it is decreased by turning anticlockwise or towards -. The intensity of the spring tension is not altered by activation or deactivation of the spring tension. **The spring tension may be adjusted only in consultation with the treating physician.** The intensity of the spring tension can be adjusted to the treatment progress.

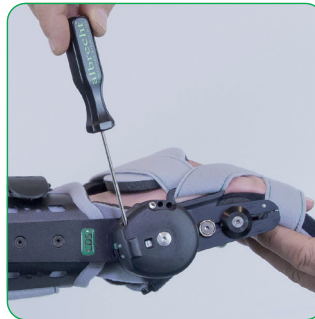


User Instructions



2.2.8. Changing the spring tension

The spring tension can be adjusted according to the treatment progress. Insert the tool as far as it will go into the side hole on the joint. By turning clockwise or towards + the spring tension is increased and it is decreased by turning anticlockwise or towards -. The intensity of the spring tension is not altered by activation or deactivation of the spring tension. **The spring tension may be adjusted only in consultation with the treating physician.**



CDS® Wrist Brace Extension

User Instructions

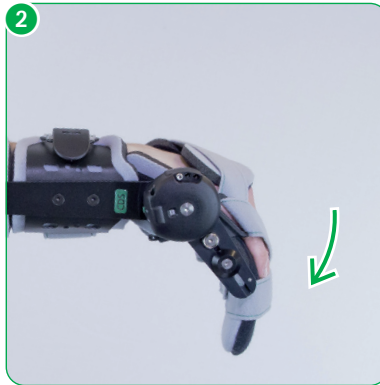
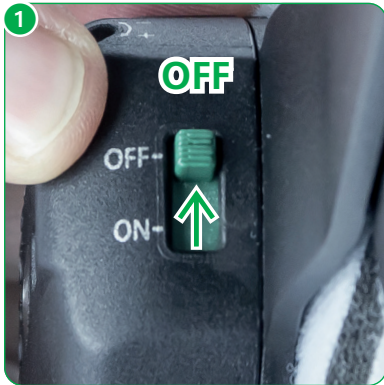
3. Handling by the patient

3.1. Removing the brace

Deactivate the spring tension

Before removing the brace you must deactivate the spring tension.

- 1 To do so, turn the green switch to „off“.
- 2 Bring the brace into flexion.

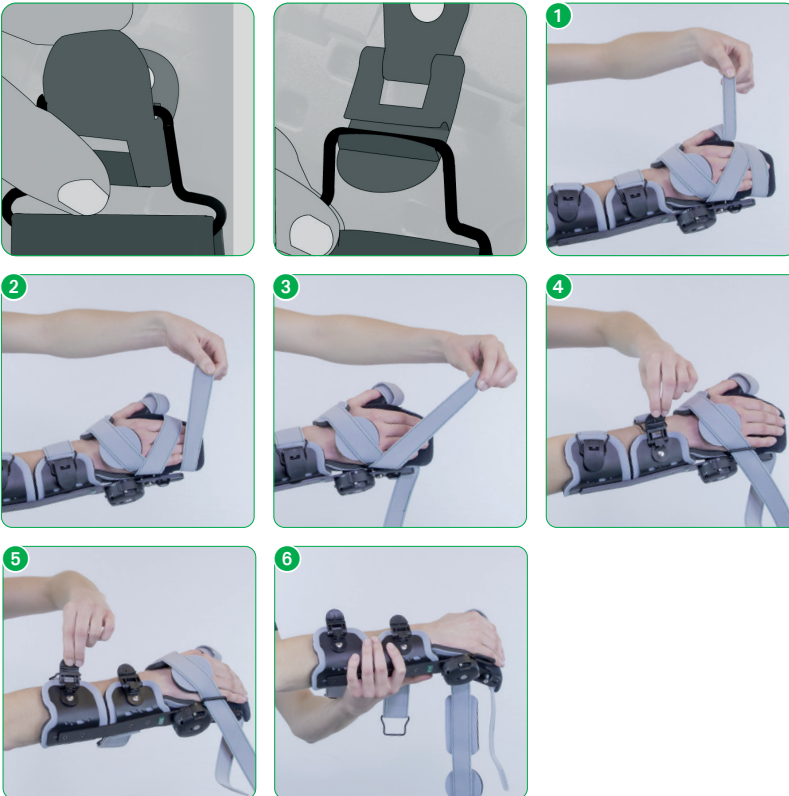


User Instructions

1 - 5 Open the straps

To remove the brace, open the clips and straps in the stated order:

First, loosen the thumb strap. Then, loosen the finger strap. Next, loosen the hand dorsum strap. Then, loosen the forearm strap next to the joint and the forearm strap further from the joint by opening the clips. Do not unthread the straps.



6 Remove the brace sideways

Take off the brace.

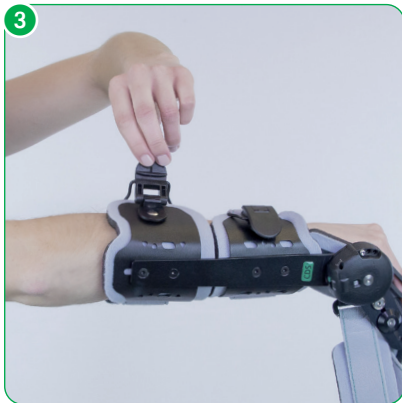
CDS® Wrist Brace Extension

User Instructions

3.2. Putting on the brace

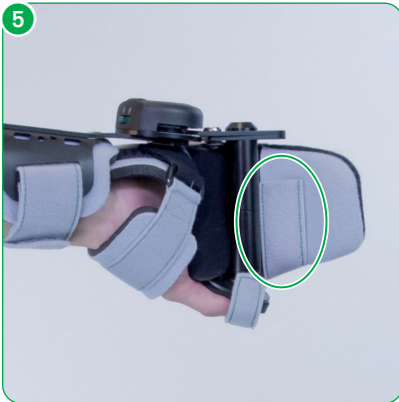
Close the clips in the stated order:

- 1 Place the brace on your arm from the side.
- 2 First fasten the forearm strap next to the joint.
- 3 Fasten the forearm strap further from the joint.
- 4 Bring the hand dorsum strap around the wrist from below and thread the strap through the loop. Pull the hand dorsum strap diagonally over the hand.



User Instructions

- 5 Fasten the hand dorsum strap underneath the finger plate.
- 6 Fasten the finger strap underneath the finger plate.
- 7 Fasten the thumb strap.
- 8 To activate the spring tension, turn the green switch to „on“.



CDS® Wrist Brace Extension

User Instructions

- 9 Bring the brace into flexion until you feel a slight resistance that you have to overcome in order to activate the spring tension.
- 10 Brace application complete.



User Instructions



Hand wash at 30°C



Do not bleach



Do not iron



Do not dry-clean



Do not tumble dry

4. Cleaning, maintenance and disinfection

The orthosis is designed to be maintenance-free. To ensure proper operation over the period of treatment the orthosis should be cleaned regularly (at least every 3 months) or as required, according to the following instructions.

4.1. Pads and straps

- All fabrics can be washed by hand at 30°C using water and a mild detergent and/or disinfectant.
- Not machine washable.
- In the case of more severe soiling, a replacement set of textile parts is available.

4.2. Rods (hinges)

- Clean all parts of the brace with a wet cloth soaked with water and a mild detergent and/or disinfectant
- Wipe down surfaces with a cloth soaked with disinfectant.
- Wet completely, and do not wipe off.
- Spray inaccessible surfaces.
- When spraying ensure complete wetting.
- A mild alcohol-based disinfectant is recommended.

Ask your physician or pharmacist when selecting a disinfectant, and follow the instructions given by the disinfectant manufacturer. The Robert Koch list of approved disinfectants can be found at www.rki.de.

CDS® Wrist Brace Extension

User Instructions

5. Technical data / material

Name	Material
Weight	788g
Padding material	PU foam with PA hook and loop velour
Strap material	PA strap with PA hook and loop velour
Brace material	aluminium

6. Size chart and article numbers

Name	Length forearm shell	Circumference forearm	Circumference wrist	Width palm plate	Art.-No. left	Art.-No. right
Wrist Extension L/L	21 - 23,5 cm	22 - 30 cm	20 - 30 cm	10 cm	931LL-L	931LL-R
Wrist Extension L/M	21 - 23,5 cm	18 - 24 cm	16 - 26 cm	8 cm	931LM-L	931LM-R
Wrist Extension L/S	21 - 23,5 cm	14 - 19 cm	12 - 22 cm	6 cm	931LS-L	931LS-R
Wrist Extension M/M	17 - 19 cm	18 - 24 cm	16 - 26 cm	8 cm	931MM-L	931MM-R
Wrist Extension S/S	16 - 19 cm	14 - 19 cm	12 - 22 cm	6 cm	931SS-L	931SS-R
Wrist Extension Junior Blue	16 - 19 cm	14 - 19 cm	12 - 22 cm	6 cm	931SS-BL	931SS-BR
Wrist Extension Junior Orange	16 - 19 cm	14 - 19 cm	12 - 22 cm	6 cm	931SS-OL	931SS-OR
Wrist Extension Junior Pink	16 - 19 cm	14 - 19 cm	12 - 22 cm	6 cm	931SS-PL	931SS-PR
Wrist Extension Junior Green	16 - 19 cm	14 - 19 cm	12 - 22 cm	6 cm	931SS-GL	931SS-GR
Strap L	580-200-S					
Strap S	580-210-S					

User Instructions

7. Transfer of the brace

The brace is 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 brace checked by an authorized specialist dealer for safe and proper operation.

8. Disposal

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

Duty to report

Due to regional legal regulations, you are required to immediately report any serious incident involving the use of this medical device to the manufacturer and the responsible authorities. Please find our contact details on the back of this brochure.

CDS® Wrist Brace Extension

User Instructions

User Instructions



Medical device



Manufacturer



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Management
System
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