# Joint Assembly NEURO VARIO 2 and NEURO VARIO-SWING

This online tutorial shows the joint assembly of our free moving system knee joints with plug + go modularity:

- NEURO VARIO 2
- NEURO VARIO-SWING

You will find all important information on adjustment and conversion possibilities in the instructions for use.

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Disassemble and clean the system joint. In order to clean the threads in the cover plate, use Super Clean LOCTITE<sup>®</sup> 7063 to remove any insulating wax residues. *Note: mind the* safety data sheet *when using Super Clean LOCTITE<sup>®</sup> 7063.* 

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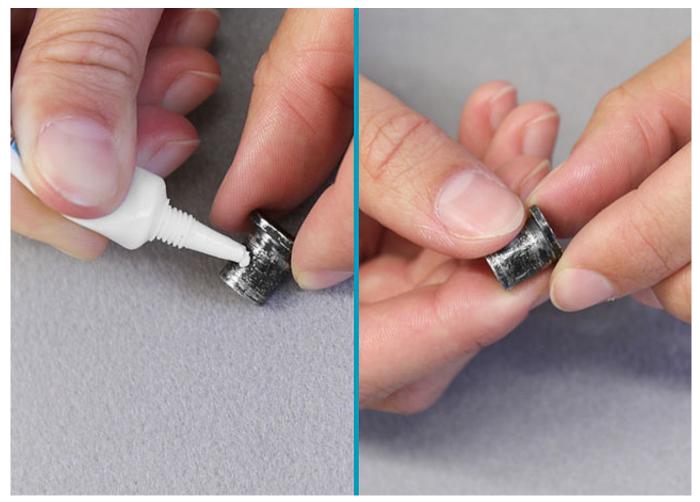


Step 2/15



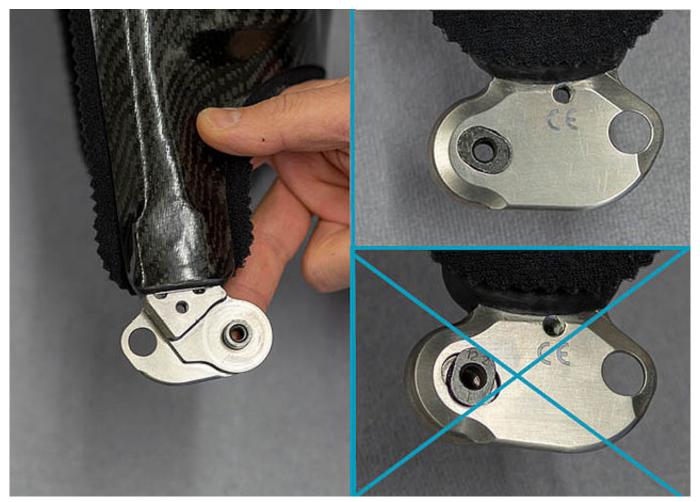
Apply spray adhesive to one side of the first sliding washer and adhere it to the cover plate. Grease the other side of the sliding washer slightly with orthosis joint grease.





Grease the axle bore of the joint axis and the friction surfaces of the bearing nut with orthosis joint grease.





Put the bearing nut into the intended opening of the joint's upper part and make sure that it is in the correct position. Secure the bearing nut with one finger.



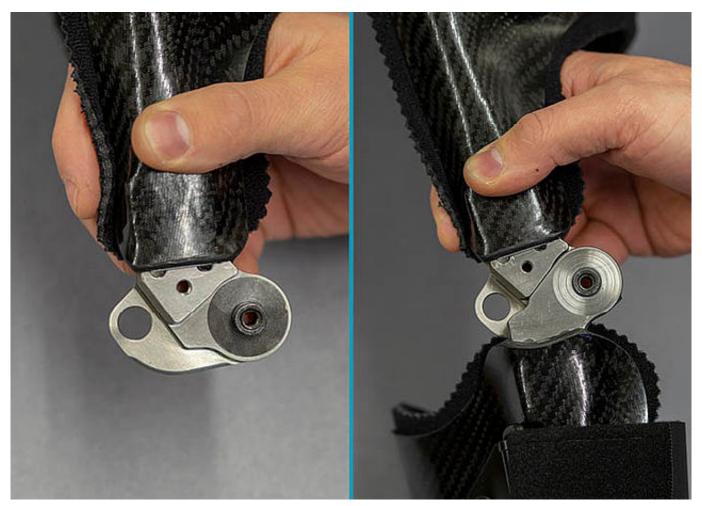
Step 5/15



Grease the second sliding washer slightly with orthosis joint grease.



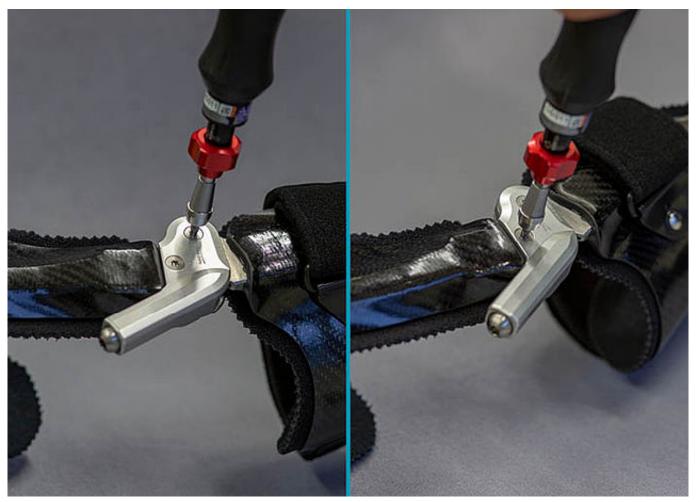
Step 6/15



While still securing the bearing nut, place the second sliding washer onto the joint's upper part and mount the joint's lower part.



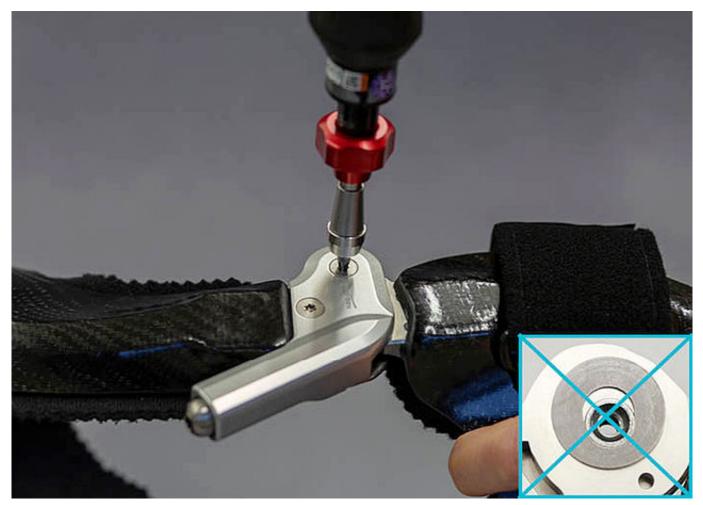
Step 7/15



Mount the cover plate. Screw in the first countersunk flat head screw (axle screw). Continue with the second countersunk flat head screw while still securing the bearing nut. *Note: you will find information about the torque (Nm) on the system joint's cover plate or in the* instructions for use.

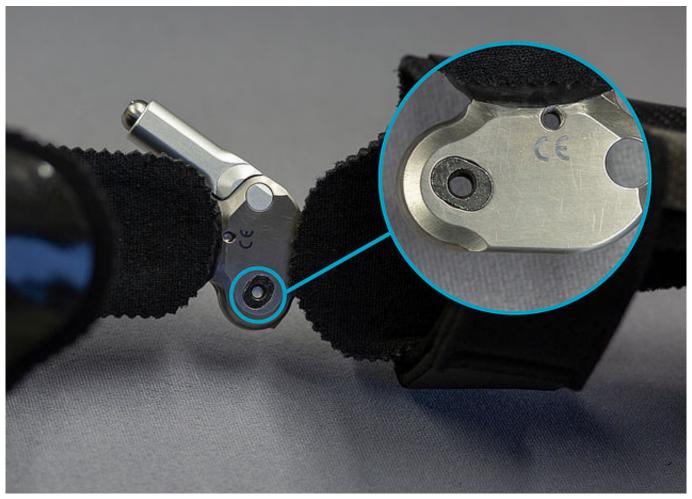


#### Step 8/15



Make sure not to damage the sliding washer during assembly. Jammed sliding washer particles can cause lateral play in the system joint.

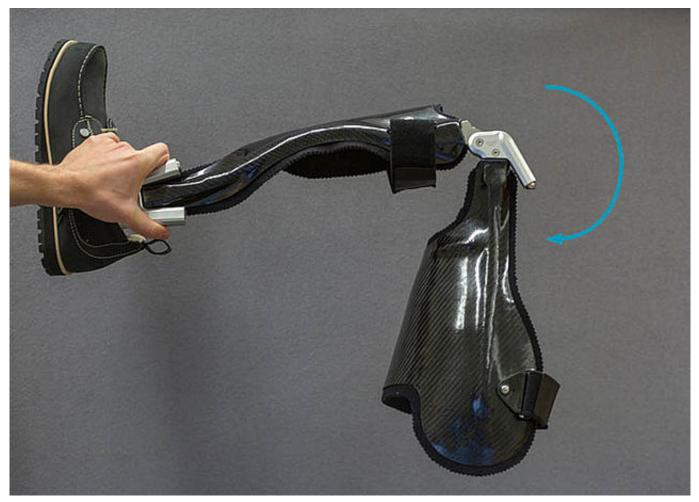




Check if the bearing nut is placed completely in the intended opening.

Note: the delivered screws always match the respective system joint. A potential discrepancy between the length of the screws and the threads of the bearing nuts has no effect on the load capacity of the system joint.





Check if the system joint moves freely. Bring the system joint in extension. In order to check the flexion, hold the orthosis in a horizontal position and then let go of the thigh shell. The thigh shell should smoothly fall downward up to the maximum possible flexion angle.

If the system joint does not move freely, mount the next thinner sliding washers, repeat all steps from step 6 onwards and check again.

Note: at a bilateral orthosis, only check one system joint at a time.

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#### Step 11/15



Check if the system joint moves without lateral play. Hold the lower leg shell and try to move the thigh shell in varus-valgus direction. If the system joint runs with lateral play, mount the next thicker sliding washers, repeat all steps from step 6 onwards and check again.

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Step 12/15



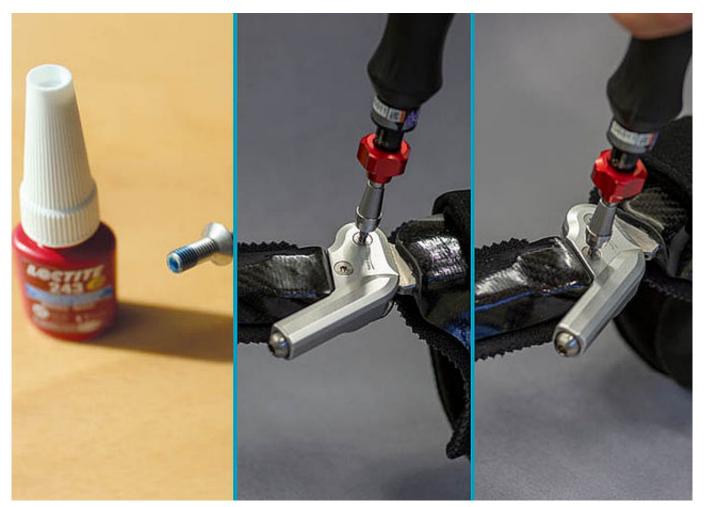
# **NEURO VARIO-SWING with Supporting Joint NEURO VARIO 2** At a bilateral orthosis, the main joint defines the maximum range of motion.

Loosen the alignment screw of the supporting joint until the extension stop finishes the motion at the same time the maximum compression of the main joint's spring unit is reached.

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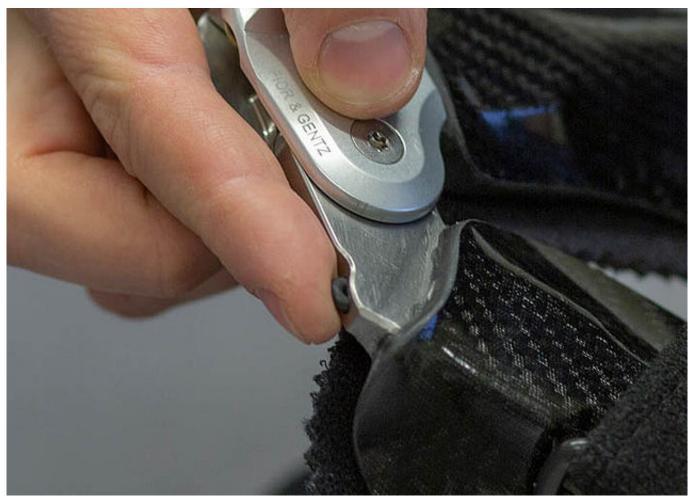
#### Step 13/15



Secure both screws with LOCTITE<sup>®</sup> 243 medium strength and the torque corresponding to the system width. Let the adhesive harden (final strength after approx. 24 hours). *Note: mind the* safety data sheet *when using LOCTITE*<sup>®</sup> *243 medium strength.* 

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Press the O-ring damper into the intended bore.

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Step 15/15



**NEURO VARIO 2** Insert the stop damper and the alignment screw.

## NEURO VARIO-SWING

Insert the spring unit and the screw unit. *Note: you can exchange the spring unit depending on the needed spring force.* 

## NEURO VARIO 2 and NEURO VARIO-SWING

Adjust the extension stop until the nose of the joint's lower part levels with the cover plate's middle mark. Thus, a physiological joint angle of 5° is reached.





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