

# **DeRoyal DeRom Wrist Splint with Tension Control User Manual**

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#### **IMPORTANT**

Read instructions before applying unit.

#### **INTENDED USE**

The DeRoyal® Range Of Motion (DeROM ®) dynamic wrist orthosis was designed for the treatment of joint stiffness and established soft tissue contractures, which may have resulted from trauma, immobilization, or neurological disorders. The orthosis should only be used under the supervision of qualified health care professionals. Protocols for use vary depending on the diagnosis and should be determined after consulting with the patient's physician. Combining flexion and extension in one unit, this orthosis can be used as a dynamic, static, or static-progressive splint

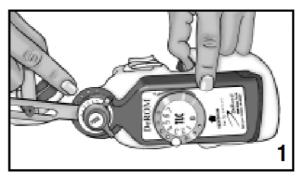
#### **CONTRAINDICATIONS**

The DeROM® orthosis should not be used in any of the following conditions exist: Severe spasticity, severe osteoporosis, phlebitis, or thrombophlebitis. Diabetes requires frequent skin checks. If pain, numbness, swelling, or skin irritation occurs while wearing the orthosis, it should be removed. The patient should be re-evaluated and appropriate adjustments made.

### **DIRECTIONS FOR USE**

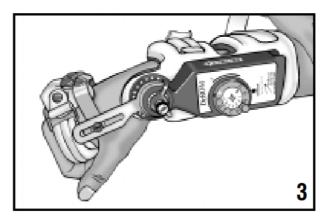
**IMPORTANT:** Set Tension Indicator Dial to 0. The Tension Indicator Dial (11) must be set to "0". Push the Tension Release Lever (7) in the direction of the arrow. At the same time turn the Tension Indicator Dial to "0". All slack must be taken out of the cable before applying tension. After applying orthosis, push in on the black hinge knob (2) and rotate the pulley until the cable is taut.

1. To set up for extension assist: The Tension Indicator Dial (11) must be set to "0". See "Important" above.

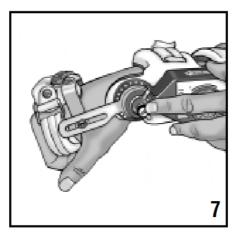


Position the red cable (1) around the top of the pulley. Push in and hold the black hinge knob (2). At the same time pull the handcuff (3) to its uppermost position. Release the black knob, and push the handcuff to its lowermost position. Repeat until the red cable is wrapped around the top of the pulley, and tension is felt on the cable.

- 2. To set up for flexion assist: The Tension Indicator Dial (11) must be set to "0". See "Important" above. Position the red cable (1) around the bottom of the pulley. Push in and hold the black hinge knob (2). At the same time push the handcuff (3) to its lowermost position. Release the black knob, and pull the handcuff to its uppermost position. Repeat until the red cable is wrapped around the bottom of the pulley, and tension is felt on the cable.
- 3. Donning the unit: Unfasten forearm straps (4) and the palmar support (5). Position the orthosis on the hand and on the medial (inside) side of the forearm.



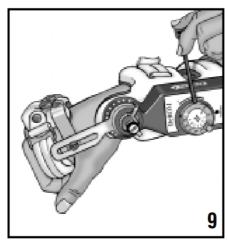
- 4. Mold the forearm cuff: Mold the forearm cuff (6) around the forearm, and cinch the two straps for a snug, comfortable fit.
- 5. Adjust the handcuff: Remove the adjustment tool (7) from the rear of the plastic housing, and adjust the handcuff to accommodate the length (8) and width (9) of the hand. **Note:** The handcuff should be positioned behind the MP joints (knuckles), and flat on the back of the hand. Replace the adjustment tool by snapping it into the rear of the plastic housing.
- 6. **Adjust palmar support:** Remove palmar support from the palm strap under the hand cuff, and mold it to the contours of the palm. Re-attach palmar strap, and cinch through D-ring.
- 7. **Position hand:** Position the hand by pushing in on the black hinge knob (2), and positioning the hand at its end range. Release the knob.



8. **Ulnar/Radial Deviation:** Adjust for Ulnar/Radial Deviation by using the Adjustment Tool (7), and loosening the two screws on the Ulnar-Radial plate (10). Adjust to the desired position, and retighten the screws. **Note:** Set Tension Indicator Dial to "0" prior to taking the slack out of the red cable. See "Important". All slack must be taken out of the red cable before applying tension. Push in on the black hinge knob (2) and rotate the pulley until the cable is taut.

## 9. Applying tension:

Remove the adjustment tool (7) and insert it into one of the holes on the edge of the tension indicator dial (11). Rotate the dial in the direction of the "Tension" arrow. Each "click" increases the tension. Adjust tension to patient tolerance. Replace the adjustment tool by snapping it into the rear of the plastic housing.



- 10. **Releasing tension:** Push the Tension Release Lever (7), at the back end of the plastic housing, in the direction the arrow indicates.
- 11. **Tension Locking Control (TLC):** Once the appropriate tension level is determined, unscrew the TLC knob (12), and position it in the threaded hole nearest the tension indicator arrow, to prevent applying excessive tension. Screw the

TLC knob completely in.

- 12. **Switching from one hand to the other:** Remove the adjustment tool (7) from the rear of the plastic housing. Loosen the length adjustment screw (8), and rotate the handcuff 180°. Retighten the screw. Remove the bracket screw connecting the Ulnar-Radial Plate to the frame. Remove the two screws (10) from the Ulnar-Radial plate, and flip the plate over end to end. Replace the two plate screws. Rotate the orthosis 180°, positioning the mechanism on the medial (inside) side of the forearm. Reattach the handcuff 3) to the frame. Replace the adjustment tool by snapping it into the rear of the plastic housing. **Note:** This procedure allows the unit to be set up on the medial or lateral side of the right or left wrist.
- 13. **Setting ROM Stops:** Pull the ROM Stops (13) up, and out of the stop hole. Reposition into the desired position.
- 14. Removing orthosis: Release tension per step #10.
  Loosen the palmar support strap (5). Open the two forearm straps (4) by pulling on the colored end of each strap. Remove orthosis.

## **CARE INSTRUCTIONS**

Clean Wire-Foam<sup>™</sup> pads and the exterior of the hinge with a non-abrasive cleaner. Straps may be machinewashed. Air-dry orthosis and straps prior to wearing.

# **PRECAUTION**

Caution should be used if any of these conditions exist: peripheral vascular disease, healing skin wounds, mild spasticity, heterotrophic ossification, and mild osteoporosis and diabetes.

Manufacturer

DeRoval

200 DeBusk Lane, Powell, TN 37849 U.S.A. 888.938.7828

865.938.7828

**Authorized Representative** 

DeRoyal Europe, Ltd. Virginia Road, Kells, County Meath Ireland

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# **Documents / Resources**



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