*Saebo*Stretch®

Product Manual

A *Dynamic* Solution for
a *Dynamic* Problem®

Saebo

No Plateau In Sight®

Introduction

Saebo Inc. is pleased to provide you with the most innovative resting hand splint available. It offers the following revolutionary features:

- Patented stretch technology using energy-storing material.
- Comfortable, non-slip, anti-migration systems for the cover and strapping components.
- Sewn-in, double-stitched straps to maximize ease of donning and proper positioning.
- Palmar padding for proper arch support and bone alignment.
- Zipper closure on the cover allows easy removal for cleaning.
- Malleable wrist and thumb sections for a personal and customized fit.
- Adjustable thumb system to allow for radial and palmar adduction/abduction.

This manual contains essential information for both the person who will wear the *Saebo***Stretch** and the clinician/orthotist who may provide and fit the splint.

Please be sure to review all information carefully.

Indications for Use

- To provide low-load prolonged stretch.
- For use with patients who have minimum to moderate tone and/or soft tissue shortening.

Contraindications

- Not for use with severe spasticity.
- Not for use with severe contractures of the wrist and finger joints.
- Not for use if open wounds, sores, or infected areas are present.
- Not for use with moderate or severe edema.

Precautions

- It is recommended that the *Saebo***Stretch** should be fit by a licensed occupational/physical therapy clinician and/or a licensed orthotist or certified fitter. This individual will be responsible for educating the client and care provider in the appropriate wearing schedule, skin assessment, correct donning and doffing procedures, as well as the care and cleaning of the splint.
- Discontinue wearing the splint if you notice any of the following: pressure areas, skin breakdown, pain, and/or numbness in the fingers. Do not resume wearing the splint until you have consulted a health care professional.
- When securing the straps, DO NOT over-tighten, as this may interfere with circulation and cause secondary medical issues.
- After removing the splint, check for strap marks on the skin. If marks are present and they do not dissipate within thirty minutes, discontinue wearing the splint until you consult with a health care professional.

Fitting Procedure

Determine Wrist Angle

It is normal for most neurological patients with spasticity or soft tissue shortening to have an initial wrist position of neutral or slight flexion. Re-assess your patient's soft tissue periodically so adjustments can be made as appropriate. The ideal position is 35 degrees of wrist extension with composite finger extension. If the client requires a lower wrist angle than 35 degrees, the goal will be to gradually position the *Saebo***Stretch** into more extension until you achieve 35 degrees of extension.

How to determine the correct starting wrist position:

1. Passively position the involved wrist in flexion, keeping the MCP, PIP, and DIP joints in composite extension. **See Figure 1.**
2. Slowly bring the wrist into extension until you feel the first indication of resistance. **See Figure 2.** Make note of this wrist angle. This is called R-1 (Resistance 1) and represents the initial wrist position for the *Saebo***Stretch**.
3. Position the splint over the edge of the table and bend the wrist into the desired position (R-1). **See Figure 3.**

Note:
The wrist angle should not be positioned below -35 degrees of wrist flexion or above 35 degrees of wrist extension. This splint is designed so that, at rest, the client's fingers are in composite extension.

Figure 1: Start position

Figure 2: End position R-1

Figure 3: Position for bending wrist angle into extension (bottom side up)

Forearm Stabilizers

Bend the Forearm Stabilizers up to make sure the proximal forearm is held securely in position.
See Figures 4 & 5.

Figure 4: Bending Forearm Stabilizers

Figure 5: Correct position for Forearm Stabilizers

Thumb Position

The *Saebo***Stretch** includes a very unique thumb system. Adjustments can be made to accommodate radial adduction/abduction and palmar adduction/abduction. **See Figures 6-9.**

Figure 6: Radial Adduction

Figure 7: Radial Abduction

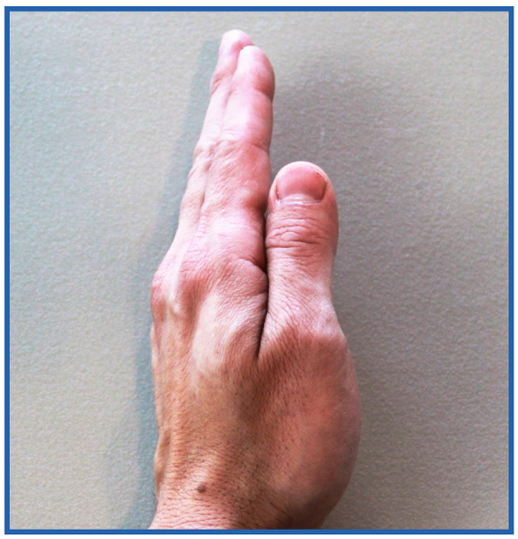

Figure 8: Palmar Adduction

Figure 9: Palmar Abduction

Before fitting the thumb, check for soft tissue shortening at the web space. The ideal position puts the thumb web space on stretch. **See Figure 10.**

If a patient has a tight web space, you may have to start with the thumb in a more radial/palmar adduction and adjust gradually into a greater amount of radial/palmar abduction as the soft tissue shortening is resolved.

Figure 10: Optimal thumb position

Two steps for properly fitting the thumb include **adjusting the hardware** to set radial adduction/abduction angle and **bending the thumb mount** for palmar adduction/abduction angle.

Step 1: Setting Radial Adduction/Abduction Angle

To adjust for radial adduction/abduction, loosen the thumb screws, rotate the thumb component to the desired angle, and then retighten. **See Figures 11 & 12.**

Note: The metal is universal (can be a left or a right). Identify the side where you see 2 screws.

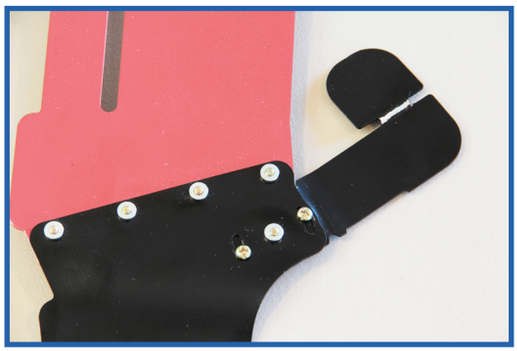

Figure 11

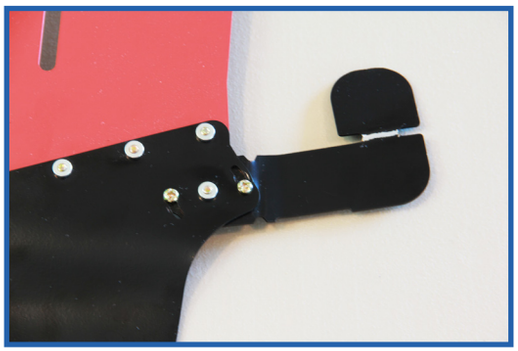

Figure 12

Step 2: Setting Palmar Adduction/Abduction Angle

In order to adjust for palmar adduction/abduction (opposition), the malleable thumb component will require bending.

Place the thumb component of the *Saebo***Stretch** over the edge of a table and gently push down. **See Figures 13 & 14. Be careful not to position the thumb into too much palmar abduction (opposition).** The ideal position puts the web space between the thumb and index finger on stretch.

Figure 13: Position for bending thumb component

Figure 14: Thumb in Palmar Abduction

After the thumb component is positioned, bend the thumb tab up so that it is perpendicular to the thumb support (90 degree angle). The thumb tab will act as a stop, reducing any unnecessary migration. **See Figures 15-16.**

Figure 15: Bending thumb tab into position

Figure 16: Optimal thumb tab position

Strap Location and Placement

The *Saebo***Stretch** straps are sewn to the cover to assist with ease of donning and to ensure correct placement. **See Figure 17.**

- Two forearm straps secure the forearm to the splint.
- One thumb strap secures the proximal phalanx of the thumb to the thumb mount.
- One hand strap (Saebo Logo) secures the hand just proximal to the MCP joints.
- Two finger straps (proximal and distal) stabilize the fingers to the hand plate. The proximal strap secures digits 2-4 and is positioned proximal to the PIP joint. The distal finger strap secures the same digits but is applied just distal to the PIP joint.
- The fifth digit strap secures the fifth digit to the hand plate.

Figure 17: Straps

Note:

For the XS *Saebo***Stretch**, due to the nature of the size, only 1 finger strap is provided. In addition, an accessory "loose" thumb strap is included. **See Figure 18.**

Figure 18: Straps for size XS

***Important:* DO NOT cut the straps. The straps are made from an elastic woven material. Trimming the straps may lead to unraveling.**

Energy Storing Hand Plates

There are three different color-coded hand plates that offer various grades of resistance. **See Figure 19.** The *Saebo***Stretch** is designed to allow the fingers to move through flexion when tone increases and then utilizes stretch technology that gradually repositions the fingers into extension. The goal of the dynamic hand plates is to reduce the pressure generated at the IP joints during periods of increased tone/spasticity.

- Yellow = minimal resistance
- Red = moderate resistance
- Blue = maximum resistance

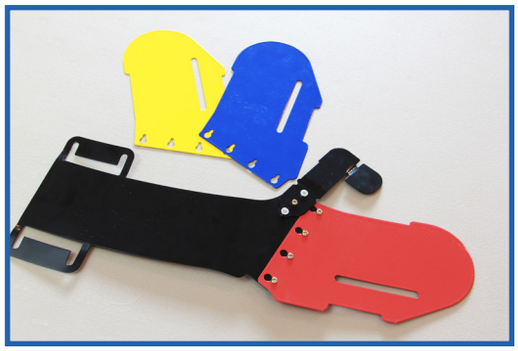

Figure 19: Forearm section and three hand pieces

When to Change Hand Plates:

- The *Saebo***Stretch** will be shipped with the **RED** hand plate. After fitting the splint, have your client move, transfer, or ambulate while wearing the *Saebo***Stretch.** This will facilitate increased tone or an associated reaction. Reassess the position of the fingers.
- If there is no evidence of finger deviation or flexion of the fingers (fingers pulling up) following the exertive activity, continue to use the red hand plate.
- However, if any of the following occur, change to a **YELLOW** hand plate:
  - PIP joints pull out of the strap (i.e., flexion) and DIP joints hyperextend.
  - PIP joints volarly sublux/hyperextend and DIP joints flex.
  - Fingers deviate laterally.
- If at any time one of the above actions occur, change to the hand plate that offers less resistance. It is important that the fingers are allowed to move through flexion to protect the IP joints.
- As the client's tone in the long finger flexors improves, consider switching to a more resistive hand plate.

Note 1: Sometimes, switching to the less resistive hand plate does not correct the fingers from flexing or deviating. If this occurs, consider decreasing the wrist angle. This will decrease the amount of tension on the long finger flexors and correct the problem.

Note 2: If the client's wrist angle is positioned above neutral and his/her fingers exhibit flexing or deviation, first consider bending the wrist angle toward, or below neutral, before attempting to change hand plates. Conversely, if the client's wrist angle is positioned below neutral and his/her fingers exhibit flexing or deviation, it is recommended to switch hand plates versus bending wrist angle into further flexion.

How to Change Hand Plates

1. Unzip the cover fully and remove.
2. Loosen the screws (DO NOT REMOVE) using the screwdriver provided. **See Figure 20.**
3. Remove the current hand plate and replace it with the desired hand plate.
4. Re-tighten the screws.

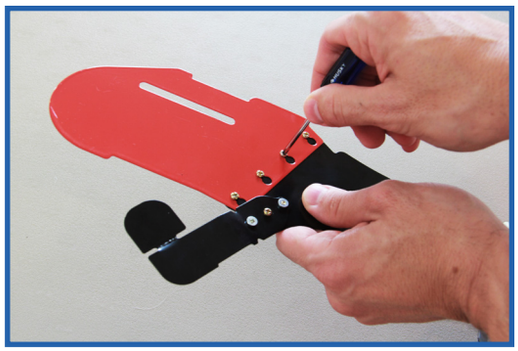

Figure 20: Using the screwdriver to change the hand piece

Wearing Schedule

It is important to increase the wearing time gradually. To accomplish this safely, the client should wear the splint during his/her waking hours, slowly increasing the wearing time day by day. Once the client can tolerate the splint for 6 to 8 hours, with no adverse reactions (i.e. pain, redness that lasts longer than 30 minutes, poor circulation), then he/she can begin to wear the splint at night. It is important that the wearing schedule be developed and monitored by a healthcare professional. DO NOT continue wearing if adverse reactions occur. Consult a healthcare professional immediately.

Trouble Shooting Tips

IP Joint Flexion

If the IP joint for the thumb or fingers remain in a flexed position, contact Saebo and request a digit cap for the specified thumb/finger. The client can wear the digit cap while in the *Saebo***Stretch**. You will need to increase the wearing time of the digit cap gradually. Pad the inside "roof" of the digit cap when using it for this application. **See Figures 21 & 22.**

Figure 21

Figure 22

PIP Joint Hyperextension

If the PIP joint(s) for the fingers exhibit hyperextension while wearing the *Saebo***Stretch**, consider applying padding under the cover directly in line with the PIP joints. **See Figures 23 & 24.** This will assist with prepositioning the joint in flexion.

Note:
Figure 24 shows the padding on top of the liner for illustrative purposes only.

Figure 23

Figure 24

Care and Cleaning

Periodic cleaning of the *Saebo***Stretch** cover should occur. To clean the *Saebo***Stretch**:

- Unzip and remove the cover.
- Once the cover is off, remove the palmar pad from the base. **See Figure 25.**
- Clean both the cover and the palmar pad with lukewarm water and mild detergent. Rinse thoroughly with cool water, wring out and allow to air dry.

To keep your *Saebo***Stretch** cover in good condition, wash the affected hand thoroughly, and dry it completely before every use.

Figure 25

Reapplying the *Saebo*Stretch Cover

When reapplying the *Saebo***Stretch** cover, start at the top of the splint by inserting the hand plate portion into the cover. **See Figure 26.** Then, wrap the cover around the thumb component and then the forearm. **See Figure 27.**

Once the cover is in the correct place, zip the liner to secure in position.

Figure 26

Figure 27

Customer:

If you experience discomfort or have any concerns about the wearing of the *Saebo*Stretch, please contact the healthcare professional that issued it to you.

Clinician:

If you experience any difficulty fitting or adjusting this splint, please contact Saebo Inc. at 1-888-284-5433 for technical assistance.

If you have questions or require further information, please contact:

Saebo, Inc.
2459 Wilkinson Blvd
Suite 120
Charlotte, NC 28208
Tel: 888.284.5433
www.saebo.com

Saebo

www.saebo.com

⚠WARNING
This product can expose you to Diisononyl Phthalate (DINP), which is known to the State of California to cause cancer.
For more information go to WWW.P65Warnings.ca.gov

Manufactured and distributed by:
Saebo, Inc.
2459 Wilkinson Blvd
Ste. 120-B
Charlotte, NC 28208

888-284-5433
sales@saebo.com
www.saebo.com

GMDN: 41459
BUDIDI/GMN: 0850331006SaeboStretchFE

EC REP
European Healthcare & Device Solutions (Ireland) Ltd.
info@europeandevicesolutions.co.uk
www.europeandevicesolutions.co.uk

Australian Sponsor:
Ausmedic Australia Pty Ltd
Unit 3, 3 Basalt Road Pemulwuy NSW
2145 1300 473 422
Performhealth.com.au

Rev. 02|2023