

# SaeboMAS mini

(Patent Pending)

## Product Manual

*Maximizing Function  
While Improving Strength*



 **Saebo**

No Plateau In Sight®

## Introduction

The *SaeboMAS mini* is a lightweight, zero gravity, dynamic mobile arm support that challenges and assists the weakened shoulder and elbow during functional tasks. This compact device was specifically designed for clients suffering from neurological and orthopedic conditions resulting in shoulder and elbow weakness.

The *SaeboMAS mini* is the ideal home program solution to improve strength, motor recovery, and independence. Clients will be able to perform functional exercises with greater ease and minimal compensation. Additionally, this personal device allows for enhanced independence for self-care, leisure or occupational tasks like using a computer, eating, drinking, or grooming.

The main feature of the *SaeboMAS mini* is the tension system. Based on the functional goals, the adjustable spring based parallelogram provides precise customization for assistance or resistance. Whether the client requires extra assistance for functional tasks or less assistance to further challenge his or her strength during exercise, the proprietary tension system is fully adjustable.

### Benefits

- Increase motor control, strength and range of motion.
- Improve self-care performance.
- Minimize over use injuries and unwanted movement.
- Provide an opportunity for the patient to perform highly repetitive tasks without fear of proximal overuse injuries or pain.
- Safe and effective way to treat shoulder subluxation.

### Contraindications

- The *SaeboMAS mini* should not be used with individuals who exhibit severe shoulder and elbow pain.

## Precautions

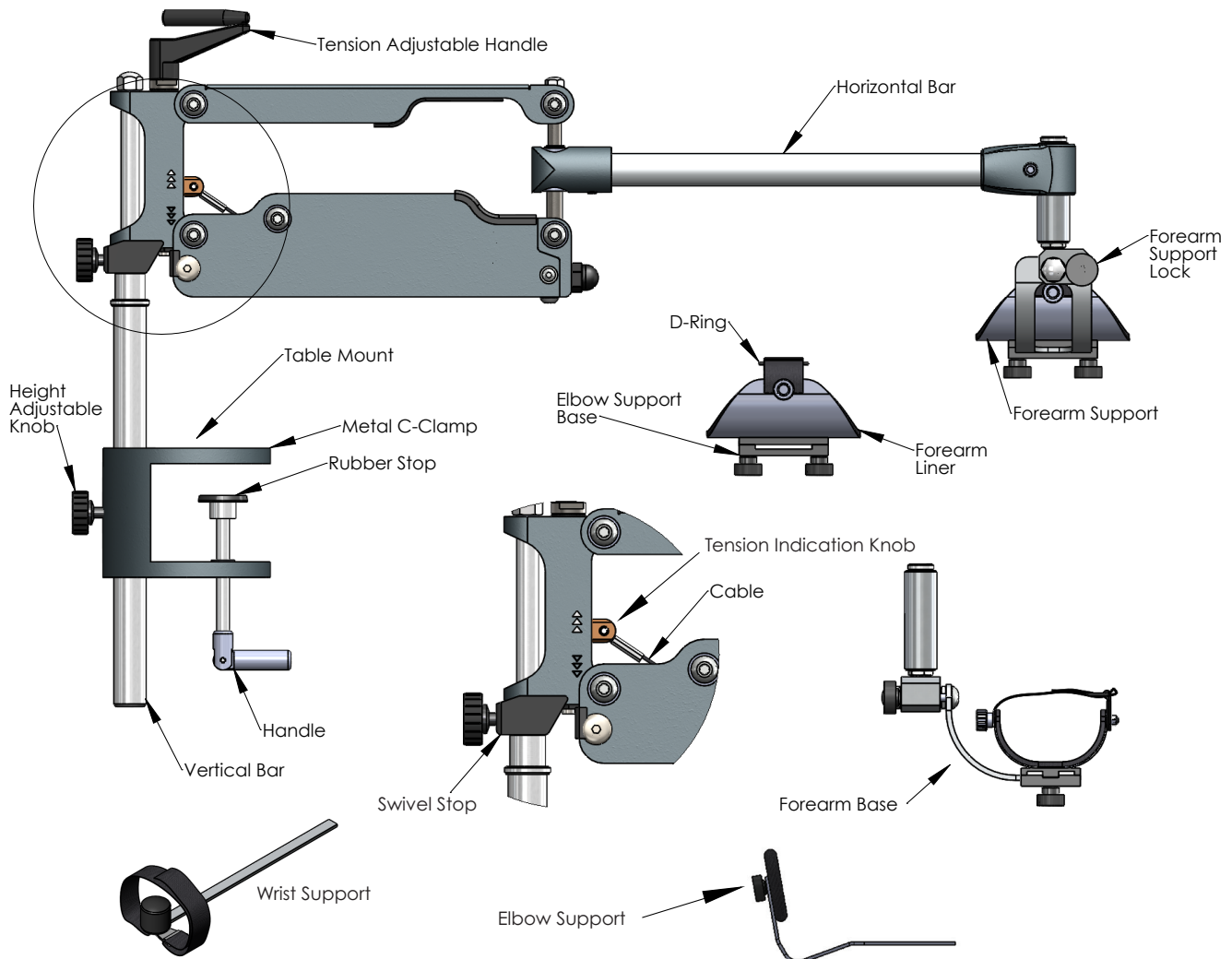
To decrease risk of bodily injury, please be sure to lower the Tension Indication Knob completely until you feel a stop (knob parallel with bottom arrow) prior to opening or closing the **SaeboMAS mini** (clipping or unclipping).

The **SaeboMAS mini** must be mounted to a sturdy table. The device should not be mounted to unstable surfaces or tables on wheels. Do not mount to plastic tables.

Do not perform hand-to-mouth activities without the Elbow Support. The Elbow Support must be attached. Without the Elbow Support attached, the Forearm Support may migrate distal (i.e., slip downwards) towards the wrist. In some cases, the Forearm Support may slip completely off the arm.

For some individuals, the Forearm Support may migrate distally (i.e., slip downwards) toward the wrist during use. Add non-slip material, such as waffled shelf liner to minimize migration.

## Parts List



## SaeboMAS mini Installation

During the installation, please keep the **SaeboMAS mini** in a closed position (i.e., horizontal bar secured/clipped to the frame) until the setup is complete (**see Figure 1**). Once you are finished installing the device, open the **SaeboMAS mini** (i.e., unclip the horizontal bar from the frame) to begin treatment. When you are not using the device, lower the Tension Indication Knob completely until you feel a stop (knob parallel with bottom arrow) (**see Figure 2**).

**Important:** To decrease the risk of bodily injury, make sure the tension is lowered completely before opening/closing the **SaeboMAS mini** (**see Figure 2**).

### A. Attach the Table Mount

1. The Table Mount should be positioned on the involved side approximately 2 feet away from the user.
2. The Table Mount should be secured to a sturdy heavy surface. Ideally, the mounting surface should be 2-3 inches (5 - 7.5cm) thick. If you are applying the Table Mount to a counter top, be sure to have a sufficient surface area to properly secure the mount to the counter.
3. Place the Table Mount in the correct position (see Figure 3).
4. Tightly rotate the Handle until the mount is secured (see Figure 4).



Figure 1

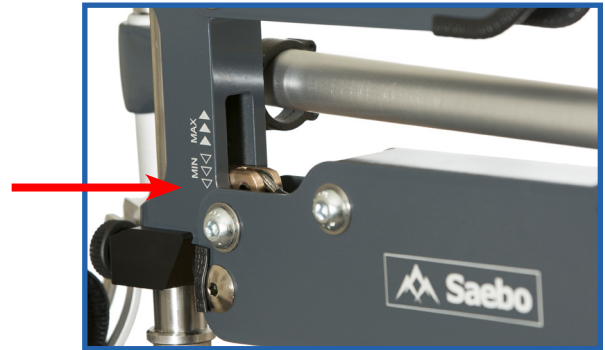


Figure 2

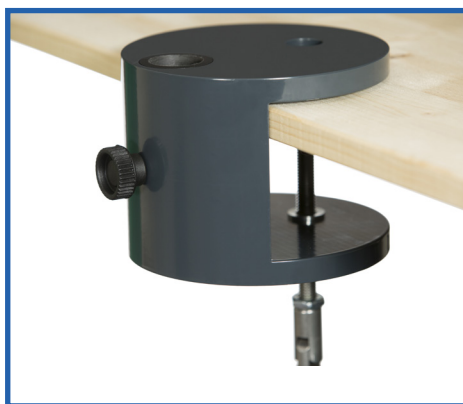


Figure 3



Figure 4



## B. Attach *Saeb*oMAS mini to the Table Mount

1. Now that the Table Mount is secured to the surface, insert the *Saeb*oMAS mini vertical pole into the opening of the Mount (see **Figure 5**).
2. Once the appropriate height is determined, secure the vertical pole by rotating the Height Adjustable Knob on the Table Mount in a clockwise direction (see **Figure 6**).
3. Be sure to keep the device in a closed position (see **Figure 1**).



**Figure 5**



**Figure 6**

## C. Height Adjustment

1. To increase or decrease the height of the device, rotate the Height Adjustable Knob in a counter-clockwise direction (to loosen) and gently pull up or push down to the appropriate height. Once the appropriate height is determined, secure the vertical pole by rotating the Height Adjustable Knob in a clockwise direction (see **Figure 6**).

**Important:** What height should the *Saeb*oMAS mini be positioned?

The Tension Adjustment Handle of the *Saeb*oMAS mini should be positioned at shoulder height of the user (see **Figure 7**).



**Figure 7**

## D. Apply Forearm Support

1. The *Saeb*oMAS mini includes 2 Forearm Supports (1 Small, 1 Medium/Large). The Medium/Large Forearm Support is attached to the device.
2. To replace the Forearm Supports, loosen the Knobs under the Forearm Support Base and remove. Replace with the Small Forearm Support and re-secure.

**Reminder:** The Forearm Supports are malleable and can be shaped for an intimate fit.

## E. Apply Elbow Support

**Important: What is the Elbow Support and when should I use it?**

1. It is highly recommended that the elbow support be used for any activities involving elbow flexion. For example, all activities that incorporate hand to mouth movements (i.e., feeding, grooming) will need the elbow support. This will prevent the Forearm Support from migrating distally (slip downwards) towards the wrist.
2. To attach the Elbow Support, loosen the Elbow Support Base Knobs. Thread the Elbow Support into the opening on the right side. Re-tighten the Knobs to secure the Elbow Support to the Elbow Support Base (**See Figure 8**).



**Figure 8**

3. Be aware that elbow extension will be limited while using the Elbow Support.  
**DO NOT USE THE ELBOW SUPPORT FOR TASKS THAT REQUIRE ELBOW EXTENSION.**

## F. Apply Wrist Support

The Wrist Support is ideal for patients that exhibit “wrist drop”. To attach the Wrist Support, loosen the Forearm Support Base Knobs and thread the Wrist Support into the opening. Re-tighten the Knobs to secure the Wrist Support to the Forearm Support.



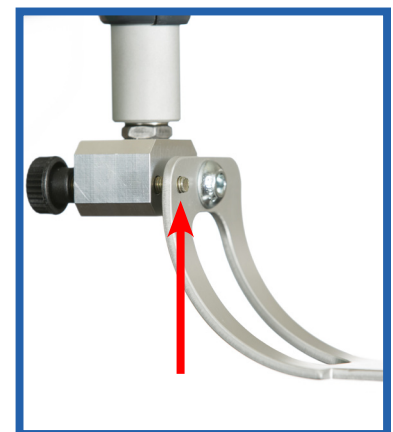
**Figure 9**



**Figure 10**

## G. Forearm Support Lock

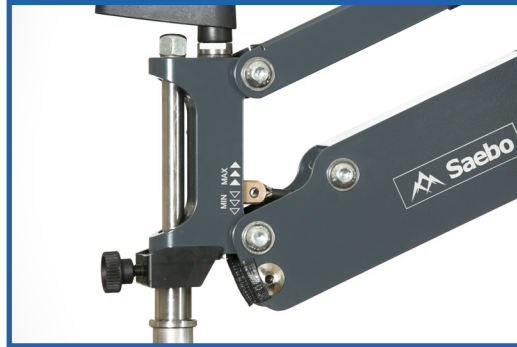
1. One of the unique features of the **SaeboMAS mini** is the ability to lock and unlock the forearm support as needed. For example, patients that exhibit poor strength at the elbow and forearm may require the forearm support to be in a locked positioned for increase stability and control (i.e., Forearm Support unable to swivel vertically/up and down). Conversely, patients that have fair or good strength at the elbow and forearm may be able to tolerate the forearm support in an unlocked position (i.e., Forearm Support able to swivel vertically/up and down).
2. To lock the Forearm Support, rotate the Knob in a clockwise direction until it threads the hole on the Forearm Support (**See Figure 11**). To unlock, rotate the Knob in a counter-clockwise direction.



**Figure 11**

## H. Tension Adjustments

The **SaeboMAS mini** includes a Tension Scale to identify and track the amount of support needed for the affected arm (**see Figure 12**). The scaled ranges from min to max (min=least amount of tension/support; max=greatest amount of tension/support).



**Figure 12**

### 1. Tension Adjustments

- a. Increase Tension/Support: Rotate the Tension Adjustment Handle in a clockwise direction.
- b. Decrease Tension/Support: Rotate the Tension Adjustment Handle in a counter-clockwise direction.
- c. To avoid damage, once the desired tension is reached, be sure to move the Tension Adjustment Handle away from the frame.

### 2. Progressing the Program

- a. When appropriate, consider decreasing the amount of tension provided to further challenge the affected arm.

#### ***Important:* How much support should be provided?**

Each individual will require a customized program based on his or her motor impairments. There should be enough support provided to successfully complete the functional task. At the same time, the support should be limited to challenge the user. Finding a balance between too much support and too little will be important.

## I. Correct Position

The **SaeboMAS mini** should be used in a seated position. The user should be positioned side-by-side (approximately 2 feet or 60cm away) from the **SaeboMAS mini**. (*see Figure 13*).



**Figure 13**

## J. Swivel Stop

The purpose of the Swivel Stop is to eliminate rotation or turning of the **SaeboMAS mini** when not in use. To avoid rotation of the **SaeboMAS mini** when not in use, tighten the Swivel Stop Knob in a clockwise direction. The **SaeboMAS mini** will not move freely when the Swivel Stop Knob is tightened.

**Important:** Be sure to loosen the Swivel Stop Knob prior to use to avoid damage.



## Incorporating the *SaeboFlex*® and *SaeboGlove*® while using the *SaeboMAS mini*

The *SaeboMAS mini* can conveniently be combined with other orthoses such as the *SaeboFlex* and *SaeboGlove*. There are several ways to stabilize the users forearm to the Forearm Support on the *SaeboMAS mini*. You will need to select the best approach based on the size and length of the user's forearm.

### Option #1:

Position the *SaeboFlex* or *SaeboGlove* just distal (i.e., below) to the *SaeboMAS mini* Forearm Support. Secure the *SaeboMAS mini* Forearm Support Strap to the arm just proximal (i.e., above) to the *SaeboFlex* or *SaeboGlove* (strap is not touching the orthosis **(See Figure 14 & 15)**).



Figure 14



Figure 15

### Option #2:

Position the *SaeboFlex* or *SaeboGlove* on top of the *SaeboMAS mini* Forearm Support. Secure the *SaeboMAS mini* Forearm Support Strap around the proximal portion of the orthosis. **(See Figure 16 & 17).**



Figure 16



Figure 17

### Option #3:

Same as Option 2, however, for the *SaeboFlex*, consider threading the strap under the bead lines for the fingers and thumb (*see Figure 18*).



**Figure 18**

## Trouble Shooting Tips

1. If the user exhibits decrease wrist extension strength (i.e., wrist drop) consider applying a wrist brace for added support.
2. If the user exhibits increased tone at the elbow flexors, it may be difficult to perform movements requiring elbow extension. To maximize the extension at the elbow, consider the following strategies:
  - a. Electrical stimulation on the triceps
  - b. Elbow air splint
  - c. Manual facilitation
  - d. EMG/biofeedback
3. During elbow flexion activities, the elbow may shift/migrate while using the Elbow Stop. For these instances, consider securing the elbow to the Elbow Support by using a Velcro strap



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