

MANUAL AMBROISE TRIPLE-MODE ARM ORTHOSIS

Part of the IMS series



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PRODUCT INFORMATION

PROFESSIONAL



AMBROISE TRIPLE-MODE ARM ORTHOSIS INFORMATION FOR THE USER

The Ambroise Triple-mode Arm orthosis (ATA) is a lightweight arm orthosis designed for people with loss of control over their arm due to, for example, a stroke, a brachial plexus lesion, a muscle disease or a connective tissue disorder. This guide explains more about the causes of reduced strength in the arm, the consequences and the operating principle of the arm orthosis.

WHEN AN ATA?

The Ambroise Triple-mode Arm orthosis (ATA) is a light weight arm orthosis, developed for people suffering from loss of control of their arm due to, for example, a CVA, a brachial plexus lesion, a neuromuscular disease or a connective tissue disorder

CAUSES OF PARALYSED ELBOW

The cause of a paralyzed elbow, in many cases, is a damage to the ganglion of the arm (Brachial plexus). This can be caused by a fracture or obstruction, for example after a motorcycle or bike accident. Also, brain damage, for example due to stroke can lead to a paralyzed arm. Sometimes the nerve damage occurred during birth. This is called Erb's palsy.

THE ATA - THREE SETTINGS

The basis of the ATA is an elbow hinge that can be set in three operation-modes. The first operation-mode is the free mode. In this setting the hinge allows free movement. In the second mode, the hinge is set to an adjustable resistance. This allows the user to individually set at which force the hinge starts to move. In this setting the user can, for example, move the elbow (by means of his other hand, or by residual function in his muscles) to a different position and rest there in that position. The third mode is the **blocked mode**. When the adjustable resistance is brought to the maximum, the elbow joint is completely locked. The arm can then remain at rest in the selected elbow position and withstand external forces, for instance by carrying small object.

FLEXION OR EXTENSION SUPPORT

It is possible to add a flexion or extention spring round the elbow hinge. The ajustable



Figure I: The ATA

Advantages of the ATA

- 🧭 Restoring arm function
- Seduced arm swing
- Solution Locking mechanism easy to operate
- 🕙 Three settings per degree of freedom: Free / Adjustable resistance / Blocked
- Section or extension support possible with optional spring unit
- Generating High wearing comfort
- 🕑 Can be worn under clothing
- 🔆 Easy donning and doffing
- Custom made and therefore perfect fit.
- Solution Low weight and yet very robust

spring supports the movements of the elbow in flexion or extention respectively.

WRIST- AND HAND SUPPORT

The ATA can also be equipped with a wrist-hand unit. This unit has two degrees of freedom. The first is dorsi and palmar flexion (lifting or bending of the hand). This allows the hand to be lifted or bent. The second is pro- and supination (turning the hand in or out). With this the orientation of the hand can be changed. Both wrist hinges have the same three settings as the elbow hinge: completely free, adjustable resistance and completely blocked.

THE HAND IN THE RIGHT POSITION

With this hinge the wrist can be brought and hold in the dorsal or palmair flexion angle you wish. But you can also choose the orientation of the hand in the desired pro- or supination and even lock the hand in that position. This makes the ATA a revolutionary arm orthosis.





Depending on the residual function of thumb and fingers, the possibilities of carrying out a task with that hand can be increased, for example, by retaining, holding or carrying an object.

TREATMENT IS NECESSARY

In order to restore some functional capabilities of the arm, to prevent contractures or reduce pain, treatment is necessary. The treatment of contractures asks for a low load stretching, resulting in long term stresses on the internal (viscoelastic) structures of the elbow. This leads to permanent lengthening at relatively low loading levels. Learning to use your hand after a stroke or after cllinical event requires time, effort and the help of professional practitioners such as PT's or OT's.

DONNING THE ATA

The ATA is easy to put on. Make sure all four velcro straps are loose. Put your arm trough the orthosis, untill the hinge is at the location of the elbow and the hand is resting on the hand support, if you have chosen for a hand support. Tighten the four velcro straps around your arm just as much as you wish. Bring the arm in the angle you prefer and lock the elbow hinge. Sometimes it is easier to first lock the elbow hinge in 90°, but experiment with the help of your OT on which procedure works best for you.

PERIOD OF TRAINING

Most users of an elbow orthosis learn to use the basics of the orthosis very quickly: in the order of minutes to several hours. Additional training and instruction by for example an occupational therapist and/or physiotherapist is nevertheless recommended.

THE ATA FOR YOU?

Our clinical experts will be happy to evaluate with you what the best solution is in your case.

Contact us now to learn about the options to get a ATA in your region.

Your local orthotist and physiatrist can also indicate whether the ATA is a viable option in the treatment of your situation.

If you want more information about the wrist orthosis, or if you are wondering if the ATA could benefit you, call us today on +31 (0)53 430 28 36 or email us info@ambroise.nl.



Figure 2: flexion, extension



Figure 3: dorsal- and palmar flexion



Figure 4: pronation and supination



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AMBROISE TRIPLE-MODE ARMORTHESE PRODUCTINFORMATIE

ATA MODELS

The ATA is available in two models. The standard model only supports the affected ellbow, but leaves the hand and fingers free. The hand model not only supports the forearm but also the hand and wrist by means of a hand support (figure 4) in cases of poor wrist and hand control. The ATA needs to be fitted to the arm of the client. All models are available in a **left** and **right** version. The Ambroise Triple-mode Arm orthosis is suitable for forearm lengths of 20 cm up to 30 cm (measured from styloid to olecranon) and circumference of 23 cm up to 34 cm (largest part of forearm).

MAINTENANCE OF THE ATA

The ATA can be cleaned with a damp cloth.

REPLACEMENT OF SPARE PARTS

It may occur that parts of the orthosis need to be replaced. Of course you can order these from us. Please contact us and we will send a replacement part.

ITEM CODES

Ambroise TripleMode™ Arm orthosis, Left:	250506
Ambroise TripleMode™ Arm orthosis, Right:	250507
Ambroise TripleMode™ Arm orthosis, Left (incl. Supro™):	250508
Ambroise TripleMode™ Arm orthosis, Right (incl. Supro™):	250509
Ambroise TripleMode™ Arm orthosis, Left (incl. Supro™&DorPa™):	250510
Ambroise TripleMode™ Arm orthosis, Right (incl. Supro™&DorPa™):	250511

ADJUSTING THE ORTHOSIS

If you have the feeling the orthosis is too tight (pinches) or too loose (slips) it is important that the orthosis is properly adjusted. Contact your local orthotist.

SPECIFICATION

Weight orthosis: 250 - 400 gram. Depending on which version you choose. Rance of motion: 0° - 140°. Minimal moment: 1 Nm. Maximum moment: 4 Nm. Maximum loading on hand/wrist: 3 kg.



Figure 4: ATA, right arm with hand support



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AMBROISE TRIPLE-MODE ARMORTHESE INFORMATION FOR THE PROFESSIONAL

Placing pelottes. Identical for al IMS pelottes. In this series you see the application to the Wilmer Elbow Orthosis.



I. Slide the outer shell on the tube (matte side out).



3. Remove the yellow strip, and press the flaps of the inner shell trough the first groove of the outer shell.



3. Press the flaps of the inner shell through the outer groove of the outer shell.



5. Remove the yellow strip so that the adhesive strip is exposed.



2A: inner shell + 2B: outer shell.



4. Shape to an S-bend.



4. Push the flaps properly through the groove so they are visible on the outside.



6. Press the adhesive strip well.



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