

## Concept

The Step-On family of products is a range of innovative ankle-foot-orthoses (AFOs) for the treatment of drop foot. The unique feature of these AFOs is that they are active dynamic, offering mechanical assistance by a spring mechanism to assist dorsiflexion, which can be finely adjusted and quantified. This differentiates them from passive dynamic AFOs which rely on the stiffness

of the material to assist/resist movement and with that stiffness being non-adjustable, or from static AFOs which allow no movement or assistance. This way Step-On AFOs allow essential sagittal plane kinematics during the gait cycle, while at the same time providing the exact amount of control required by each patient, at every stage of their rehabilitation programme.



Lateral Hinge

Dual Hinge

Medial Hinge

### Indications

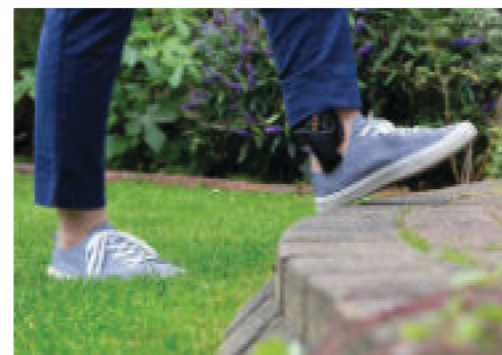
Drop foot caused by paresis or paralysis due to:

- Stroke
- Multiple sclerosis
- Cerebral palsy
- Spinal cord injury
- Head injury
- Peripheral nerve injuries
- Neuropathies
- Muscular dystrophies
- Spinal muscular atrophy
- Motor neuron disease
- Poliomyelitis

### Contraindications

- Skin lesions/infections
- Lymphoedema
- History of deep venous thrombosis of the lower limb
- Ankle-foot contractures
- Excessive or gross knee hyperextension, as the AFO will struggle to prevent this

## Features



The Step-On AFOs incorporate unilateral or bilateral spring-loaded hinges. Those allow a range of movement (ROM) between 22° dorsiflexion and 11° plantarflexion. This ROM enables improved initial heel contact and foot clearance during swing phase, better step clearance when climbing stairs and the ability to walk up/down hill, or with a small heel, without affecting the tibial alignment. It also allows the knee to flex past 90° while sitting, which promotes independence in sitting to standing for patients.

The adjustable dorsiflexion assistance allows precise tuning of the AFO according to the patient's ability to activate their dorsiflexor muscles (to prevent masking this activity), the muscle tone of the plantarflexors, their body weight, usual walking speed, etc., ensuring optimal gait biomechanics. It also offers the unique capability of altering the assistance according to the patients' needs, as their walking ability fluctuates day-to-day and even morning to evening. The dorsiflexion assistance is adjusted easily with an Allen key that increases or decreases the spring tension within the hinge.

The Step-On AFOs feature slimline hinge and foot plate design and come with ¾ length foot plates, allowing them to fit easily in different everyday and formal shoes. They can also be combined with foot orthoses (insoles). The tibial shell is covered with a lining, which can be removed hand washed and air dried. All hook-and-loop straps are sufficiently long and can be cut to the appropriate length during fitting. Furthermore, the straps are fitted with foam pads, ensuring comfort and enhancing skin integrity. Both the tibial shell and foot plate are made of high-quality polypropylene. They can be easily formed to shape using mild heat treatment and they can be trimmed back by an orthotist or orthopaedic technician.

The hinges are protected by a neoprene sleeve, in order to avoid contamination with debris during daily use. Furthermore, the hinge system can be fully disassembled for cleaning and servicing, while a full list of spare parts is provided, to ensure a prolonged lifetime for all Step-On AFOs.

### Step-On Features

- Easily adjustable dorsiflexion assistance allows continuous optimisation of the AFO's biomechanical characteristics to match the patient's gait, throughout the rehabilitation process.
- Available with lateral, medial, or bilateral hinges
- Extremely lightweight, polypropylene construction
- Unilateral hinge AFOs fit easily in standard footwear - no need for larger shoe size.
- Can be easily thermoformed to shape or trimmed back.
- High quality liners and foam pads for enhanced skin integrity and comfort.
- Hook-and-loop straps allow easy fastening of the orthosis.
- Liners and foam pads can be removed and cleaned easily.
- Hinges are protected from debris by neoprene sleeves.
- Hinges can be disassembled for cleaning and servicing.
- Full list of spare parts is available.
- Available in a range of sizes to fit individuals up to 100 Kg.

## Products

### STEP-ON 100 Lateral Hinge (LH)

SIZE	Small -Medium	Large -X Large
Code (Right)	100 / LH / RT / S - M	100 / LH / RT / L - XL
Code (Left)	100 / LH / LT / S - M	100 / LH / LT / L - XL
Shoe size (European)	35 - 40	41 - 46
Shoe size (UK)	2.5 - 7	7.5 - 12
Max weight	100 Kg	100 Kg

#### Service and Maintenance

To maximise the functionality of Step-On, apply a few drops of light lubricating oil every few weeks into the gap at the rear of the hinge and then flex-extend the brace six times.

#### Spare Parts

All component parts are available to purchase separately.



### STEP-ON 100 Medial Hinge (MH)

SIZE	Small -Medium	Large -X Large
Code (Right)	100 / MH / RT / S - M	100 / MH / RT / L - XL
Code (Left)	100 / MH / LT / S - M	100 / MH / LT / L - XL
Shoe size (European)	35 - 40	41 - 46
Shoe size (UK)	2.5 - 7	7.5 - 12
Max weight	100 Kg	100 Kg

#### Service and Maintenance

To maximise the functionality of Step-On, apply a few drops of light lubricating oil every few weeks into the gap at the rear of the hinge and then flex-extend the brace six times.

#### Spare Parts

All component parts are available to purchase separately.



### STEP-ON 200 Dual Hinge (DH)

SIZE	Small	Medium	Large	X Large
Code (Right)	200/DH/RT/S	200/DH/RT/M	200/DH/RT/L	200/DH/RT/XL
Code (Left)	200/DH/LT/S	200/DH/LT/M	200/DH/LT/L	200/DH/LT/XL
Shoe size (Euro)	Up to 39	Up to 43	Up to 44	Up to 46
Shoe size (UK)	Up to 5	Up to 9	Up to 10	Up to 12
Bimalleolar width	6.3 - 7.0 cm	7.1 - 7.5 cm	7.6 - 8.1 cm	8.2 - 8.6 cm
Max weight	100 Kg	100 Kg	100 Kg	100 Kg

#### Service and Maintenance

To maximise the functionality of Step-On, apply a few drops of light lubricating oil every few weeks into the gap at the rear of each hinge and then flex-extend the brace six times.

#### Spare Parts

All component parts are available to purchase separately.

#### A solution to control Varus / Valgus

Step-On 200's patented system allows easy adjustment to help counter varus/valgus, by simple repositioning of the ankle strap.



#### Varus

The strap is threaded through the central slot and secured at the back of the brace, while its anterior part is attached to the **medial** side, pulling the tibia in that direction.



#### Valgus

The strap is threaded through the central slot and secured at the back of the brace, while its anterior part is attached to the **lateral** side, pulling the tibia in that direction.

