

Conventional Metal & Leather AFO

Overview

A custom-fabricated conventional metal & leather ankle-foot orthosis.



Designs & Components:

- Lateral and medial metal uprights.
- Metal stirrup with ankle joint unit each end.
- A shoe fixed to the metal stirrup.
- Cuf band and straps.

Principle and Gait Biomechanics

- Improved ventilation ideal for fluctuating edema adaptation.
- Tri-planar control of the ankle joint motion using three-point pressure (3pp) system.
- The 3pp force system provides ankle plantarflexion control and varus/valgus correction.
- Axial load force transmission over the side metal uprights to reduce the force acting on the anatomical joint.
- External force control (GRF re-aligning) by orthosis alignment.



Indications:

- Ankle joint instability.
- Sensitive skin to total contact with the plastic shell.
- Soft tissue volume change due to edema.
- Ankle dorsiflexor & plantar flexor muscles weakness.
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Prerequisite for use:

- Abnormal lower limb sensation.
- Unstable skin and soft tissue condition (wounds, pain, edema...).
- Normal upper limb power and dexterity.
- Intact trunk stability and balance.

