Advanced Composite Fiber Technology to Improve Outcomes in Orthotic Science

Range of Motion

Thuasne USA now offers three reliable OTS carbon AFOs to address a variety of clinical indications.



Proven Durability

For a diverse range of clinical indications and patient needs, you can rely on the performance, quality and durability of our growing range of composite AFOs. The SpryStep, SpryStep Max, and SpryStep Plus were independently tested by mechanical engineers using a surrogate leg and a loaded cyclic testing device, achieving two million cycles with no structural deficits.

*Cycle-testing performed by an independant lab under ISO10328 servo pneumatic test system. This standard is typically used to test prosthetic feet.





SprySte

Prescription Guide

This chart is intended to assist with product selection and sizing. Custom solutions are also available, and additional AFO releases will be coming in the future.

Biomechanical Deficit		Spry Step®	SpryStep® Plus	SpryStep® Max	Custom option*
	Fatigueable footdrop	√	✓		✓
	Footslap	1	✓		✓
	Footdrop	1	✓		✓
	Excessive plantarflexion during swing phase (Secondary to weak dorsiflexors)	1	✓		✓
ons	Weakness of the pretibial muscles \leq 3	1	✓		✓
nditi	Plantar flexor strength ≥ 4	1	✓	✓	✓
Cor	Plantar flexor strength 3 or 4		✓	✓	✓
nkle	Plantar flexor strength 2			✓	✓
Ā	Plantar flexor strength 0 or 1				✓
	Pain in movement toward dorsiflexion			✓	✓
	Partial foot amputation (Chopart or more distal)			~	✓
	Partial foot amputation (Chopart or more proximal)				✓
	Knee hyperextension	1			✓
	Mild knee instability during stance phase	1	✓	✓	✓
ns	Moderate knee instability during stance phase		✓	✓	✓
nditio	Pronounced knee instability during stance phase			✓	✓
e Co	Mild quad weakness		✓	✓	✓
Kne	Moderate quad weakness			✓	✓
	Pronounced quad weakness				✓
	Excessive knee flexion during stance phase (Secondary to weak planter flexors)		✓	✓	✓
	Plantarflexion contracture				✓
	Knee hyperextension caused by calf muscle spasticity				✓
	High tone				✓
	Inconsistent oedema				✓
her	High pitched footwear				✓
õ	Running/high impact activities				✓
	Circumduction	1	✓		✓
	Vaulting	×	✓		✓
	High knee gait	1	✓		✓
	Hip hiking / contralateral trunk lean	✓	✓		✓

*If a standard OTS product is not adequate for a specific patient, we have the capacity to modify the structure of an OTS product, or to receive a cast or scan that can be utilized to create a custom configured and fabricated version of the SpryStep® AFO.

Spry St	ep® Sizing		Spry S	tep [®] Plus Sizing
Size	Foot Length	Height	Size	Foot Length
XS	81/2 – 9 5/8 inch	11³/4 inch	XS	81/2 — 95/8 inch
SM	9 ¼ – 10 ¼ inch	12 5/8 inch	SM	91/8 — 101/4 inch
MD	9 ⁵ / ₈ – 10 ⁷ / ₈ inch	13 ¾ inch	MD	9 ⁵ /8 — 10 ⁷ /8 inch
LG	10 ½ – 11 ¾ inch	14 ¼ inch	LG	10 ¹ / ₄ — 11 ³ / ₈ inch
XL	11 ³/8 — 12 inch	15 inch	XL	11³/8 — 12 inch



Height to Tib Tuberosity	Calf circumference 1" below fibula head
13 inch	11½ – 14½ inch
14 ¼ inch	12 ³ / ₄ — 15 ³ / ₄ inch
15 ½ inch	13½ – 17½ inch
16 ¾ inch	15³/4 — 18³/4 inch
18 inch	16½ – 19½ inch







SpryStep® Max Sizing

Size	Foot Length	Height
XS	7³/4 — 8 ¹/₂ inch	13 ¼ inch
SM	8 ¼ – 9 inch	14 ½ inch
MD	9 — 10 inch	15 ½ inch
LG	10 — 10 ³ /4 inch	16 ½ inch
XL	10 ³ / ₄ — 11 ¹ / ₂ inch	16 ½ inch



SpryStep[®] Solutions





SpryStep[®]

DYNAMIC SPIRAL STRUT AFO

PDAC APPROVED L1951

Launched in October, 2016, the SpryStep® is an elegant and effective solution that is incredibly durable. During the first year of sales, reported warranty replacements due to delamination were ONLY .2 percent.



Proprietary Fabrication

Precise selection and layup of diverse composite materials create remarkable strength and beautiful cosmetic characteristics.



Posterior Lateral Strut

The spiral strut is uniquely positioned behind the malleoli to amplify energy return and fit more easily into most shoes.



Customizable

The forefoot can be easily trimmed for a perfect fit.





SpryStep[®] Plus

DYNAMIC ANTERIOR AFO PDAC APPROVED L1932

The new SpryStep Plus incorporates the SpryStep posterior lateral strut and trimmable forefoot design in an anterior Ground Reaction AFO. The geometry provides excellent dynamic properties and optimized durability.



Proprietary Fabrication

Ideal geometry combined with material selection and precise layup achieve outstanding durability and an elegant cosmetic finish.



shell design provides effective dynamic reaction, especially noticeable on sloped surfaces.

Anatomical Padding

The low-profile padding incorporates a recessed tibia crest relief zone.



Posterior Lateral Strut The spiral strut applied to an anterior

Forefoot can be trimmed to achieve a customized fit.

Design Achievements

A combination of optimal geometry and well-balanced material selection deliver a "spry" gait for the patient.

> Opposing force



SpryStep[®] Max

DYNAMIC ANTERIOR AFO PDAC APPROVED L1932

The new SpryStep[®] Max is an enhanced rendition of a traditional full anterior shell AFO, with increased dynamic response and enhanced knee stabilizing benefits.



Proprietary Fabrication

The incredible success of the original SpryStep inspired the structural and cosmetic elements of this attractive anterior shell AFO.



Anterior Lateral Strut

The strut seamlessly integrates into the footplate anterior to the malleoli to achieve the desired stabilization and gait-assist.



Anatomical Padding

The anterior shell is lined with an elegantly engineered 3D-shaped pad featuring a recessed tibia crest relief zone.





Design Achievements

The structural and material elements create graduated stiffness to achieve knee stability and enhanced forward progression

> Opposing force

Desired biomechanical force

Stabilizing force

Stabilizing force

Desired

biomechanical force