

**3**

# SOLUTIONS FOR Knee Hyperextension

CROSS™

C.H.E.C.K™

COMBO™



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# CROSS™ Hyperextension Knee

## Functional and easy to use

CROSS™ Knee Hyperextension Orthosis is designed to manage mild to moderate knee hyperextension associated with neuromuscular conditions or injury. The orthosis may also be used in combination with Allard AFOs where knee hyperextension is present alongside foot drop.

### Indications:

Knee hyperextension due to Stroke, Post-Polio or other neuromuscular diseases or injuries like weakening M.Quadriceps or weak calf muscles. Genu recurvatum with intact ML ligaments.

### Contraindications:

The brace is not intended for sport activity. The brace should not be used when all function in M. Quadriceps is lost or when knee ligaments are disabled. Hyperextension  $\geq 15$  degrees.



### Lightweight, breathable material

The orthosis is constructed from thin, breathable, and lightweight materials to support comfort during daily use. The unique wide upper cuff is designed to remain open, allowing the foot and leg to slide easily into position. The cuff can be grasped to assist with pulling the orthosis into place and aligning the patella opening over the knee.

### Smooth, low-friction liner

The seamless liner provides a protective interface between the orthosis and the skin. It is designed to help reduce the risk of skin irritation and allows the orthosis to glide more easily during application.

### Donning aid

A dedicated CROSS™ donning aid is included to support independent application. It enables users with reduced balance to don the orthosis in a seated position.

### One hand application.

The unique design supports one-handed application, enabling individuals with hemiplegia or reduced hand dexterity to apply the orthosis more independently.



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## Tailored Components for Optimal Knee Support

1. **Silicone band**  
Strategically placed to help prevent migration
2. **Patella opening**  
Anatomically shaped patella opening with silicone buttress.
3. **Adjustable ROM stops**  
Flexion: 45°, 60°, 75°, 90°  
Extension: 10°, 20°, 30°, 40°
4. **Condylar shells**  
Self-contouring condylar shells for improved fit and stability.
5. **Pre-flexed shape**  
The pre-flexed anatomical design follows the contours of the leg to support a comfortable fit, and provide ease with donning and doffing.
6. **Reinforcement stays**  
Anatomically shaped reinforcement stays support correct alignment of the orthosis and AFO when worn together.
7. **Easy resistance adjustment**  
Hyperextension resistance can be adjusted easily with one hand.



## How to use the donning aid

- Insert the donning aid into the opening located in the posterior semi-rigid thigh cuff (identified by the grey binding tape).
- Release all straps, then apply the orthosis with the hyperextension CROSS™ strap positioned anteriorly (i.e. applied back-to-front).
- Guide the foot into the sleeve. The smooth fabric liner allows the orthosis to be rotated into the correct position and drawn up the leg until the patella opening is correctly aligned over the knee.



The donning aid is included with each CROSS™ Hyperextension Knee orthosis.



Watch our instruction video for more details.

Item No.	Size	Circumference 15cm (6") below mid-patella	Circumference mid-patella	Circumference 15cm (6") above mid-patella
287150011	Small	32-37cm (13-15")	32-37cm (13-15")	39-44cm (15½-17¼")
287150012	Medium	36-41cm (14-16")	36-41cm (14-16")	43-48cm (17-19")
287150013	Large	40-45cm (15¾-17¾")	40-45cm (15¾-17¾")	47-52cm (18½-20½")
287150014	X-Large	44-49cm (17¼-19¼")	44-49cm (17¼-19¼")	51-57cm (20-22½")

Use only as directed. See IFU for full safety information, indications, contraindications, and precautions.  
Patent: US20200015991A1



## A functional combination

### Knee Hyperextension and Foot Drop

CROSS™ is designed to use either as a standalone hyperextension Knee orthosis or in combination with an Allard ankle foot orthosis (AFO) where foot drop is also present. The design allows integration with an AFO without interference from straps or buckles. The posterior CROSS™ strap provides resistance to knee hyperextension while maintaining functional mobility.

CROSS™ is compatible with all Adult Allard dynamic response AFO:

- Ypsilon®
- ToeOFF®
- BlueROCKER® (pictured)



No straps or buckles  
intervene with the AFO

Use with any Allard AFO

## C.H.E.C.K™

### Comfortable Hyper Extension Control Knee

C.H.E.C.K™ is designed for the management of knee hyperextension and mild to moderate knee instability. Soft upper and lower suspension sleeves, combined with a popliteal interface and adjustable straps, help maintain correct positioning of the frame. The adjustable strap system provides a controlled resistance to limit knee hyperextension while allowing functional movement.

#### Indications:

Genu recurvatum, unstable knee caused by laxity of the ligaments, mild valgus instability, mild varus instability, neurologic function impairment (post C.V.A.).

#### Contraindications:

Not intended for sports activities

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#### Reduced Force on Thigh and Tibia

Long lever arms reduce the forces applied to the femur and tibia when controlling hyperextension and mild to moderate knee instability, supporting improved patient tolerance.

#### Hyperextension Control

Proximal strapping can be easily adjusted to provide an appropriate degree of hyperextension control, tailored to individual patient needs.

#### Functional Suspension System

Dual suspension supports, one proximal to the femur and one distal to the tibia, help maintain positioning of the frame. This system provides functional suspension while offering a soft interface between the orthosis and surrounding soft tissues.

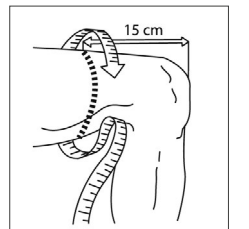
#### Medial - Lateral Stability

Stainless steel medial and lateral uprights are joined posteriorly by a rigid horizontal crossbar. The uprights can be contoured by the orthotist to accommodate individual anatomy and provide the required medial-lateral stability.



## Lightweight & Adjustable

1. **Condylar pads**  
Two adjustable condylar pads allow positioning for a close and secure fit.
2. **Reduce Distal Migration**  
A posterior popliteal strap rests comfortably over the gastrocnemius to help reduce distal migration.
3. **Lightweight Design**  
Weighs approximately 624g.
4. **D-ring system**  
Four D-rings are included and can be positioned on either side of the brace to accommodate individual patient needs.
5. **One Size**  
Fits knee widths 3 1/2" - 5 1/4"



Item No.	Product description	Size	Measurement	Length	L/R
286520000	CHECK™ Stainless Steel	One Size	3½" - 5¼"	18"	Bilateral
286510000	Replacement Interface	-	-	-	-
286530000	D-Ring Set of 4	-	-	-	-

Use only as directed. See IFU for full safety information, indications, contraindications, and precautions.

**CHECK™**

# COMBO™ – The Perfect Combination

COMBO™ combines world-leading carbon composite AFO technology with a carbon composite hyperextension knee orthosis to support lower limb alignment and functional mobility.

## COMBO Features:

- Anatomically shaped thigh cuff
- Dual-axis joints to support physiological movement
- Popliteal interface for more controlled knee extension
- Adjustable stainless steel uprights for individual anatomical fit
- Pre-contoured, adjustable connector compatible with ToeOFF® and BlueROCKER® models\*

\*Should not be used with Ypsilon Flow½, ToeOFF Flow 2½, Short models, or Pediatric versions.

## COMBO™ with ToeOFF® or BlueROCKER®

Dynamic carbon composite AFOs designed to support foot drop and promote efficient gait combined with genu recurvatum knee support.

## Custom Fabrication

Enables fabrication of a lightweight KAFO within your own clinical or workshop setting.



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# Therapy, and Patient Friendly!

- The thigh cuff and knee control assembly can be easily removed from the ToeOFF® or BlueROCKER® orthosis.
- Supports use within rehabilitation programmes. Where knee hyper-extension control is no longer required, the AFO may be used alone, potentially reducing the need for an additional orthosis.
- The knee control component may be removed when hyper-extension control is not required, for example during periods of rest.

Easy to don and doff

Quick release buckles and straps



# COMBO™

# Fabricate a Custom KAFO

## 1 Joints with Uprights

Item No.	Size
28780 0000	One Size

## 2 Tibia Connector

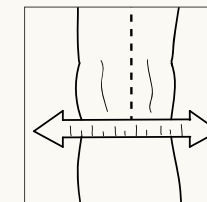
In general, select the same size as the ToeOFF® or BlueROCKER®. However, a smaller size may provide a closer fit for individuals with a smaller calf, while a larger size may be more suitable for those with a larger calf circumference

Item No.	Size
28784 0011	Small
28784 0012	Medium
28784 0013	Large/X-Large

## 3 Knee control Component with popliteal interface

Take a M-L (knee width) measurement.

Item No.	Size	Medial-Lateral
28782 0011	Small	2 ¾ – 4 ¼ in.
28782 0012	Medium	3 ¾ – 5 ¼ in.
28782 0013	Large	5 – 6 ¼ in.

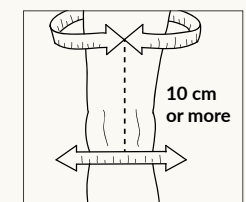


## 4 Thigh Cuff

Take a circumferential measurement at the level where the thigh cuff will be positioned, ensuring this is approximately 8" (20 cm) above the tibial plateau.

At the same level, take a mediolateral (M-L) measurement.

Item No. Left	Item No. Right	Size	Circumference	M-L
28781 1011	28781 2011	Small	11¾ – 15¾ in.	4¾ – 6 in.
28781 1012	28781 2012	Medium	15 – 19¾ in.	5¾ – 6 in.
28781 1013	28781 2013	Large	19 – 23¾ in.	6 – 7½ in.
28781 1014	28781 2014	X-Large	22¾ – 27½ in.	6 ¾ – 6 in.



## 5 Thigh Cuff SoftKIT

Same size as Thigh Cuff.

Item No.	Size
28783 0011	Small
28783 0012	Medium
28783 0013	Large
28783 0014	X-Large

### WARNINGS

- Maximum user weight: 330 lbs
- Maximum user height: 6 ft 7 in
- COMBO™ must only be used in combination with Allard ToeOFF® or BlueROCKER® AFOs\*
- The COMBO™ KAFO must be fitted by, or under the supervision of, a qualified orthotist

\*Not compatible with ToeOFF Flow 2½, Ypsilon® Flow ½, or short versions.



## Support for Better Life

Everyone should be able to live their life to the fullest, regardless of their mobility challenges. With innovative solutions developed in close collaboration with healthcare professionals and patients, we strive to provide Support for Better Life.

**allard**

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