



After years of fabricating some of the industry's highest quality pediatric total contact foot orthoses, Orthomerica's TC Flex System now includes many options in one base price, making it easier for you to select the product without having to add and pay for extra features. TC Flex custom AFOs come completely equipped with transfer patterns on straps and orthosis, felt pads, non-skid bottoms, heel post, tone reducing modifications & toe pads as well as our double density tongue design for added comfort. Experience the increasing benefits of a Total Contact, Total Control- TC Flex orthosis.



A valuable addition to TC Flex™ AFOs... the new Molded Inner Boot (MIB). Compared to normal liners, the MIB offers more comfort and strength. Softness and intimate fit are not compromised for durability in this flexible design. The MIB is nearly indestructible and almost impossible to tear. Take the challenge and consider including a MIB with your patient's next AFO.

TC Flex Orthoses are separated into four categories to assist with differentiating each orthosis and understanding the recommended use.

- Group 1** Hind-foot control consists of orthoses that control the hind-foot and mid-foot position to provide a stable base of support.
- Group 2** Sagittal control contains orthoses that have varying levels of dorsiflexion and plantarflexion control without the use of articulating joints. Two of the designs in this group are two-part (combo) orthoses.
- Group 3** Articulated orthoses provide free dorsiflexion with limited or blocked plantarflexion through the use of hinges and plantarflexion stops.
- Group 4** Reactors consist of orthoses with the potential to block dorsiflexion or provide precise range of motion for both dorsiflexion and plantarflexion. Orthoses include solid, articulated, and adjustable styles.

### Group 1: Hindfoot Control Orthoses

#### Sub-Mo Open

*Recommended for:*

- Correctable subtalar instability
- Excessive pronation secondary to muscle laxity
- Bony or sensitive feet requiring a soft interface to cushion bony prominences



*Not recommended for:*

- Severe mid-foot instability

#### Sub-Mo Wrap

*Recommended for:*

- Correctable, subtalar and mid-foot deviations
- Excessive pronation secondary to muscle laxity
- Pre-walkers and new walkers needing precise foot alignment to improve balance and functional skills



*Not recommended for:*

- Patients needing more proximal control to correct alignment

### Supra Malleolar Orthosis (SMO)

*Recommended for:*

- Significant forefoot, mid-foot, and subtalar instability
- Global foot deviations due to low or high tone
- Foot deviations that interfere with stance and balance
- Young children with significant foot instability that need free dorsiflexion and plantarflexion for crawling, pulling to stand, and squatting



*Not recommended for:*

- Knee flexion or extension instability
- Persistent toe walking

### Group 2: Sagittal Control Orthoses

#### Leaf Spring

*Recommended for:*

- Assisting dorsiflexion without completely limiting plantarflexion
- Clearance in swing and positioning of the foot for heel strike
- Stabilizing the foot and ankle without locking out all motion
- Severe pronation that cannot be managed with an SMO alone
- Weakness in both sagittal and coronal planes



*Not recommended for:*

- Knee flexion or extension instability

#### Leaf Spring-Combo

*Recommended for:*

- Resistance to plantarflexion with flexible dorsiflexion
- Mild hyperextension of the knee
- Toe walking

*Not recommended for:*

- Strong knee hyperextension
- Resisting dorsiflexion and/or reducing knee flexion



#### Plantar Blocker

*Recommended for:*

- Restriction of plantarflexion (or dorsiflexion and plantarflexion when tibial strap is used)
- Knee hyperextension secondary to excessive plantarflexion
- Toe walking
- Transfers for non-ambulatory patients when used with a proximal strap



*Not recommended for:*

- Patients who benefit from having more sagittal plane flexibility
- Patients with knee flexion instability (when proximal strap is removed)

### Full Blocker Combo

*Recommended for:*

- Weakness in dorsiflexors and plantarflexors with need for definitive foot alignment
- Post-operative positioning to balance and stabilize foot/ankle complex
- Pain in foot and ankle with motion
- Patients in transition between SMO and AFO
- AFO use during the day with SMO used after school
- Daytime use of SMO portion alone with Combo used for stretching at night

*Not recommended for:*

- Patients needing free dorsiflexion and resistance to plantarflexion



### Articulating Combo

*Recommended for:*

- Dorsiflexion weakness with mid-foot deviations and no knee flexion instability
- Toe walking
- Knee hyperextension due to plantarflexion

*Not recommended for:*

- Knee flexion instability/crouch gait pattern



### Full Blocker Resting

*Recommended for:*

- Non-ambulatory positioning of foot/ankle complex
- Post-operative positioning

*Not recommended for:*

- Ambulatory patients
- Patients needing a more active and functional orthosis



### Group 4: Floor Reaction Orthoses

#### Full Blocker Reactor

*Recommended for:*

- Crouch stance secondary to weakness at ankles, knees and hips
- Knee flexion instability
- Loss of plantarflexors and quadriceps weakness
- Need for a mechanical knee extension moment in stance and possessing full range of motion at the knee and hip

*Not recommended for:*

- Patients who can benefit from dorsiflexion
- Crouch stance secondary to high tone
- Crouching accompanied by toe walking
- Uncorrectable crouching in stance secondary to knee and hip flexion tightness



### Group 3: Articulating Orthoses

#### Dorsi-free Overlap

*Recommended for:*

- Dorsiflexion weakness and mid-foot deviations with no knee flexion instability
- Toe walking
- Knee hyperextension
- Severe mid-foot and forefoot deviations (no plantar stop used)

*Not recommended for:*

- Knee flexion instability/crouch gait pattern



#### Dorsi-blocker Reactor

*Recommended for:*

- Crouch stance/gait secondary to weak plantarflexors
- Knee flexion instability and crouching secondary to quadriceps weakness
- Patients who need a few degrees of dorsiflexion range to enhance functional skills on inclines, transitional movements, and play activities

*Not recommended for:*

- Crouching without any plantarflexion strength
- Crouching secondary to high tone



#### Dorsi-free Stretch

*Recommended for:*

- Increasing or maintaining dorsiflexion range with precise foot/ankle control

*Not recommended for:*

- Patients with range of motion limitation due to bony blocks
- Non-compliant patients



#### Transformer

*Recommended for:*

- Precise control of dorsiflexion and plantarflexion range of motion
- Variable pathology that vacillates between remission and exacerbation
- Adjustable orthotic management sensitive to improving or deteriorating conditions

*Not recommended for:*

- Patients who do not require precise control of dorsiflexion and/or plantarflexion



#### Articulating Wrap

*Recommended for:*

- Dorsiflexion weakness with plantar block when a low profile orthosis is indicated
- Dorsiflexion weakness with good knee stability when plantar flexion is blocked
- Toe walking
- Knee hyperextension due to plantarflexion

*Not recommended for:*

- Knee flexion instability/crouch gait pattern
- Dorsiflexion tightness with mid-foot instability



**For more details, call the Custom Fabrication Hotline at 877-737-8444**  
*Order forms may be downloaded at*  
**[www.orthomerica.com/forms](http://www.orthomerica.com/forms)**



star  band<sup>®</sup>  
When nature needs a nudge.<sup>™</sup>

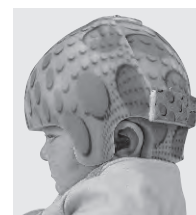
## STAR Family of Cranial Remolding Orthoses

The STAR Family of Cranial Remolding Orthoses has been used to treat positional Plagiocephaly, Brachycephaly, Scaphocephaly and other head shape deformities in infants 3-18 months of age since 2000. Over 150,000 infants have been successfully treated with the STARband<sup>®</sup>, the first cranial remolding orthosis with FDA clearance available to O&P practitioners across the United States and around the globe. And now, Orthomerica has received FDA clearance for the STAR Family of Cranial Remolding Orthoses for post-operative Craniosynostosis.

- Orthomerica currently offers the widest selection of cranial remolding orthosis designs available, each designed to effectively manage a variety of head shape deformities, levels of severity, and clinical indications.
- Orthomerica's cranial remolding orthoses can be fabricated from a positive modified cast, unmodified cast, or a scan of the infant's head using the STARscanner<sup>™</sup>.
- The STARband<sup>®</sup> and STARlight<sup>™</sup> designs provide total contact over the prominent areas of the skull and leave voids over the flattened areas to provide a pathway for more symmetrical skull growth.
- The STARband and STARlight bi-valved designs are effective for treating Scaphocephaly and other head shape deformities.
- Treatment generally takes 3-4 months, but varies depending on the infant's age and severity of cranial asymmetry.
- Clinical consultation is available through our staff of ABC Certified Orthotists.
- In conjunction with Dr. Jimenez and Dr. Barone for their Craniosynostosis Endoscopic Procedure, Orthomerica has co-developed a custom cranial remolding orthosis, STARlight PRO, to treat every type of suture involvement.



**STARband<sup>®</sup>**  
Side-Opening Band



**STARband<sup>®</sup>**  
Bi-Valve



**STARlight<sup>™</sup>**  
Side Opening Band



**STARlight<sup>™</sup>**  
Bi-valve



**STARlight<sup>™</sup> PRO**  
Helmet



# STARlight™ PRO

- Designed in cooperation with renowned physicians, Dr. Jimenez and Dr. Barone specifically for post-operative endoscopic craniectomy cranial remolding orthosis therapy
- STARlight PRO design is in direct response to their style of surgery, protocols and procedures
- A series of STARlight PROs are used for a period of 18 months immediately following surgery
- The STARlight PRO has been tested and proven to work for the last 10 years
- Orthomerica received 510k for STARlight PRO designs in July 2009
- 6 specific orthoses pad configurations available depending on suture release procedure: bi-coronal, bi-lambdoidal, metopic, sagittal, uni-coronal and unilambdoidal





## STARscanner™ Laser Data Acquisition System

The STARscanner™ Laser Data Acquisition System replaces the need for plaster casting. In less than 2 seconds, the eye-safe laser collects the baby's head shape data. 3-D data can be viewed in multiple planes. This captured data is transmitted to Orthomerica for fabrication of the cranial orthosis.

### STARscanner Features

- Class 1 laser-scanning device
- Scans infant's head shape in two seconds or less eliminating the need for plaster casting
- Used to order custom cranial remolding orthoses from Orthomerica
- Capture 3-D data that can be viewed in multiple planes



STARscanner shown on available STARcart (sold separately.) Laptop computer not included.

**The STARscanner can save your facility time and money, and offers many benefits, including:**

- **Save time**—Eliminates the casting process for ordering cranial remolding orthoses.
- **Save shipping costs**—There is no need to package and ship a cast—STARscans and order specifications are emailed to Orthomerica.
- **Eliminate the traditional casting process**—The casting process is often considered by some practitioners and parents to be traumatic and uncomfortable for infants. However, with the STARscanner, there is no plaster mess and fewer tears from infants and parents.
- **Accurate**—Up to + / - 0.5 mm.
- **Safe**—The STARscanner has been classified as a Class 1 laser scanning device. Class 1 lasers are low-power lasers and are eye safe during all normal operating conditions. Other Class 1 laser products include laser printers, CD players, and CD-ROM devices.
- **Easy to use**—Can be operated by one person, requiring only basic computing skills.

