

# CRANIAL

Product Standards

HFN

# PURPOSE

## Hanger Fabrication Product Standards

The Hanger Fabrication Product Standards are a collaborative effort to deliver Best in Class O&P devices to our patients.

The goals of the product standards are to:

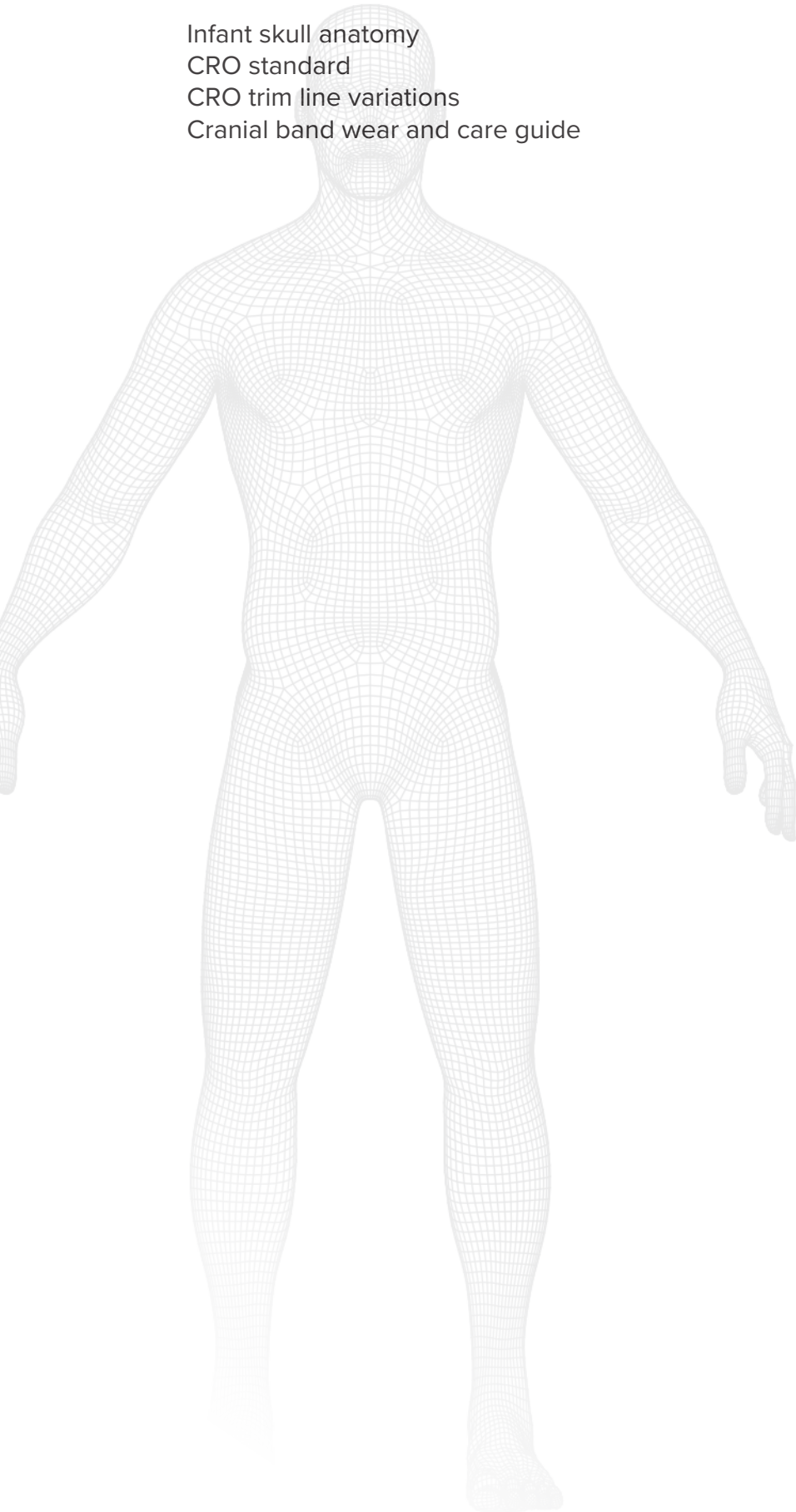
- 1) ALIGN** expectations between clinicians and technicians
- 2) CONTROL** input and output variations and
- 3) REFERENCE** best in class blueprints and orthomerty sheets to fabricate products that translate into maximizing clinical outcomes for Hanger patients
- 4) SUPPORT** future system integration (MRP)
- 5) REINFORCE** clinical research outcome reliability through controlling design variation

**Endorsements:** Mary-Kate Ennis, MBA, CO, Aaron Flores, PhD, Jim Campbell, PhD, Jeffrey Lutz, CPO, Brandon Dale, John Rheinstein, CPO, Kevin Carroll, CP, Dan Strzempka, CP, Damien Borrás.

**Acknowledgment:** We would like to extend our appreciation to the many clinicians and technicians across Hanger who collaborated on the Hanger Product Standards development.

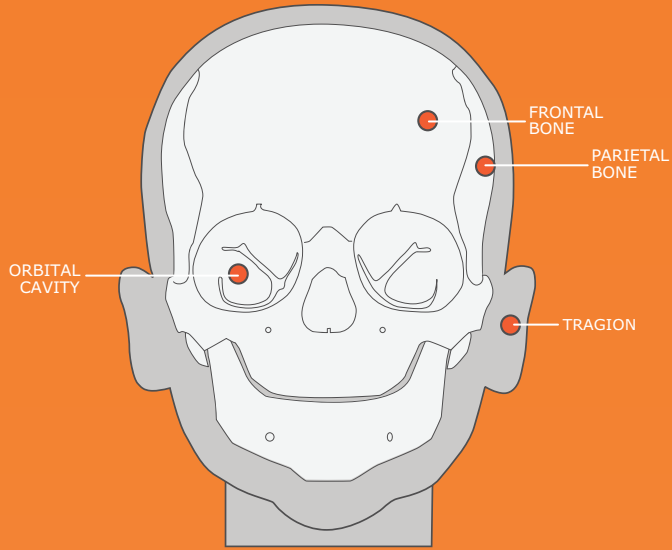
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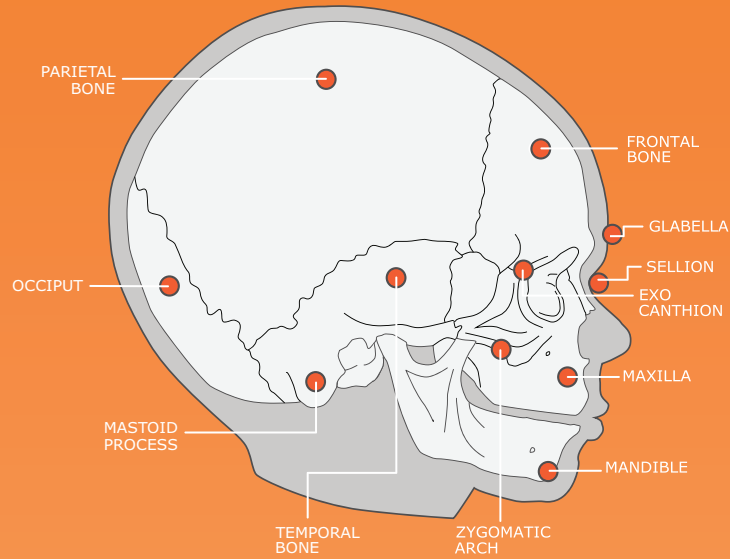


# INFANT SKULL ANATOMY

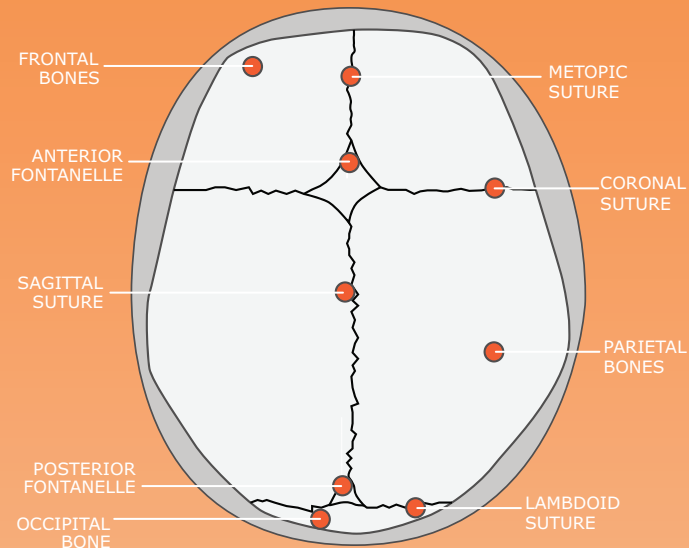
FRONT VIEW



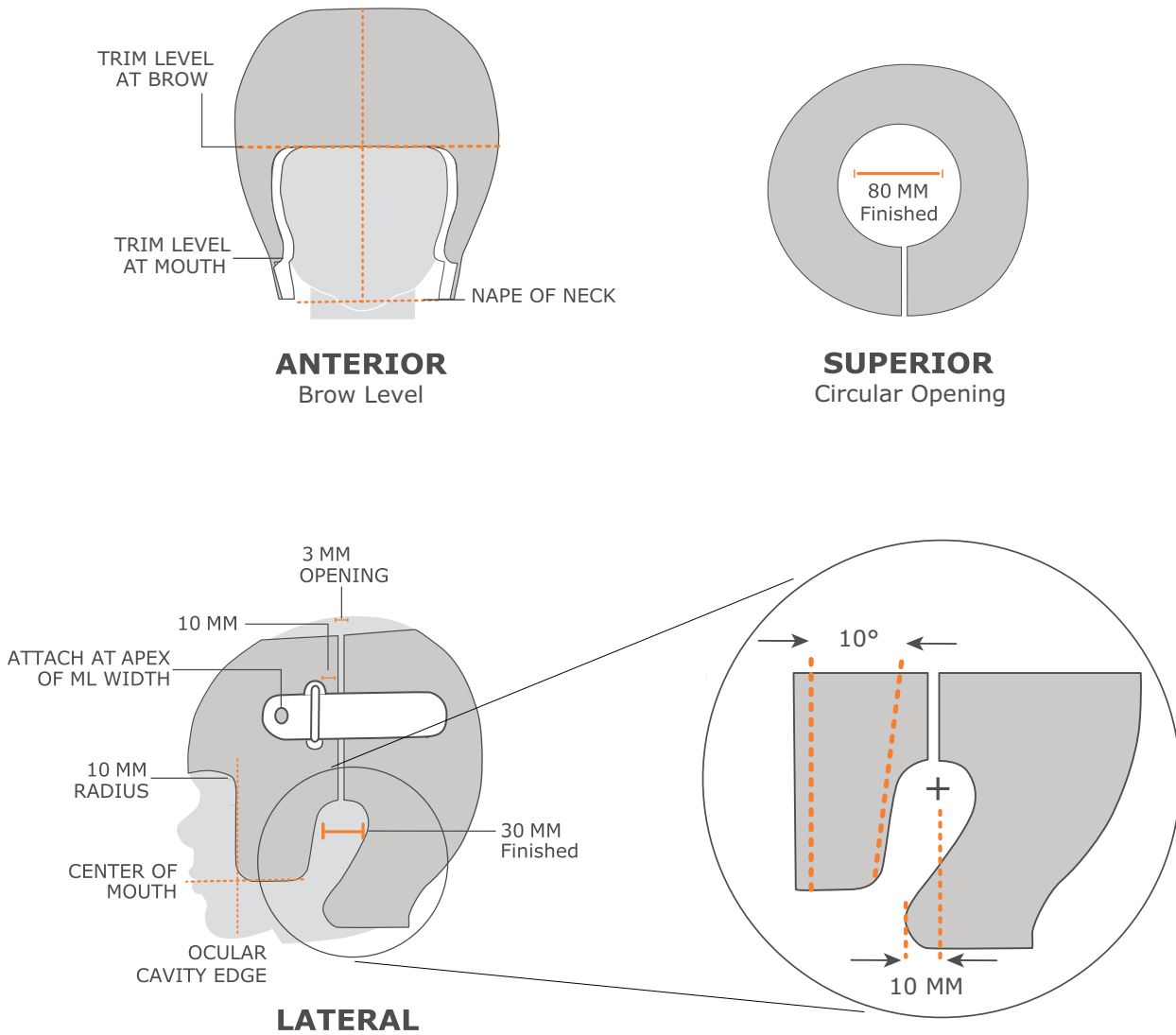
SIDE VIEW



TOP VIEW



# CRO STANDARD

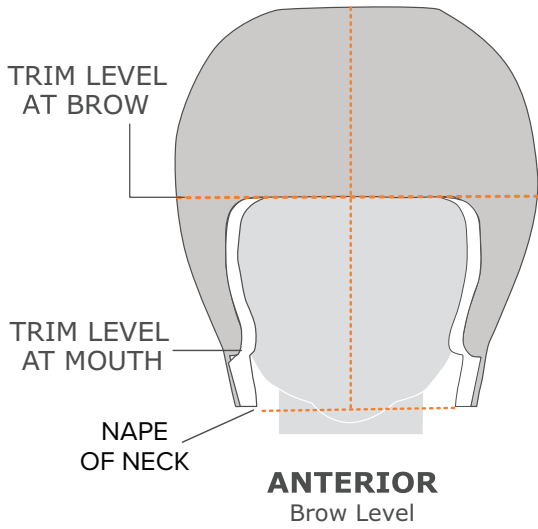


CTQ MEASUREMENTS CTQ = Critical to Quality	STANDARD MATERIAL /TRIMLINES	VARIATIONS ON REQUEST
<ul style="list-style-type: none"> <li>△ AP, ML, 30° diagonals</li> <li>□ Max circumference</li> </ul>	<ul style="list-style-type: none"> <li>• 5/32" Copoly</li> <li>• 1/2" Plastazote liner</li> <li>• 30 mm ear opening finished, 25 mm programmed</li> <li>• 1 1/2" Dacron strap</li> <li>• 1 1/2" Chafe and loop, attach at ML apex, min 10 mm anterior to opening</li> <li>• Max gap 6 mm</li> <li>• 8 mm superior opening finished 67 mm programmed</li> </ul>	<ul style="list-style-type: none"> <li>• Aliplast Liner</li> <li>• CRO Trim Line Variations</li> <li>• Right or left opening</li> <li>• Bi-valve, Surlyn (fishmouth)</li> </ul>

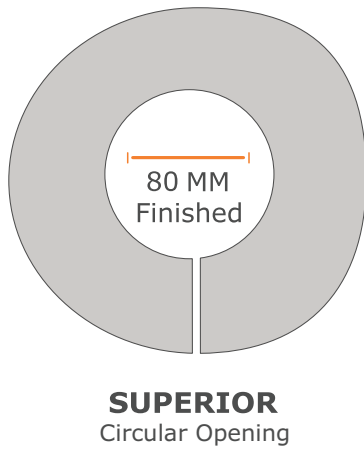
# CRO TRIM LINE VARIATIONS

Note: Trim line variations do not apply to Surlyn or Bi-Valve designs.

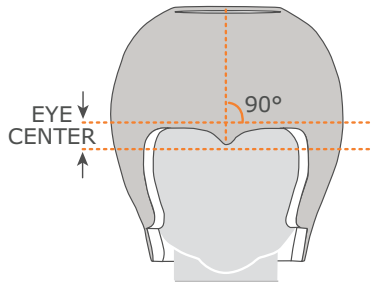
## STANDARD



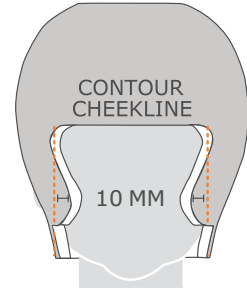
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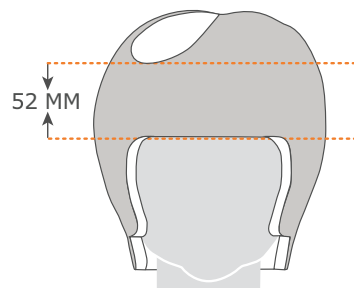
## ANTERIOR TRIMS



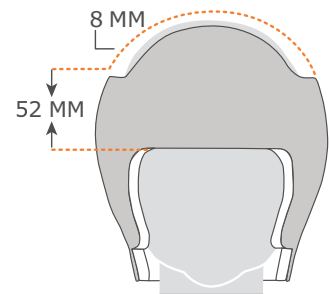
**METOPIC V-EXTENSION**



**SPARTAN ANTERIOR**

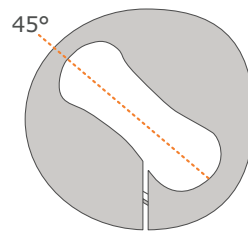


**PHOENIX ANTERIOR\***  
*\*High left shown, high right option is available*

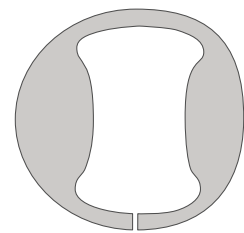


**SCAPHO TRIM**

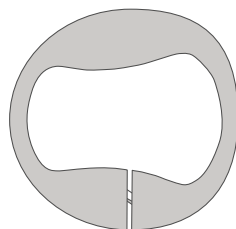
## SUPERIOR TRIMS



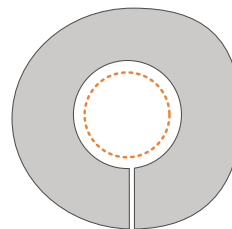
**PHOENIX TRIM\***



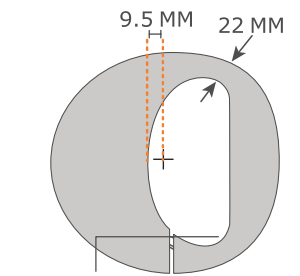
**SCAPHO TRIM**



**BRACHY TRIM**



**47 MM**

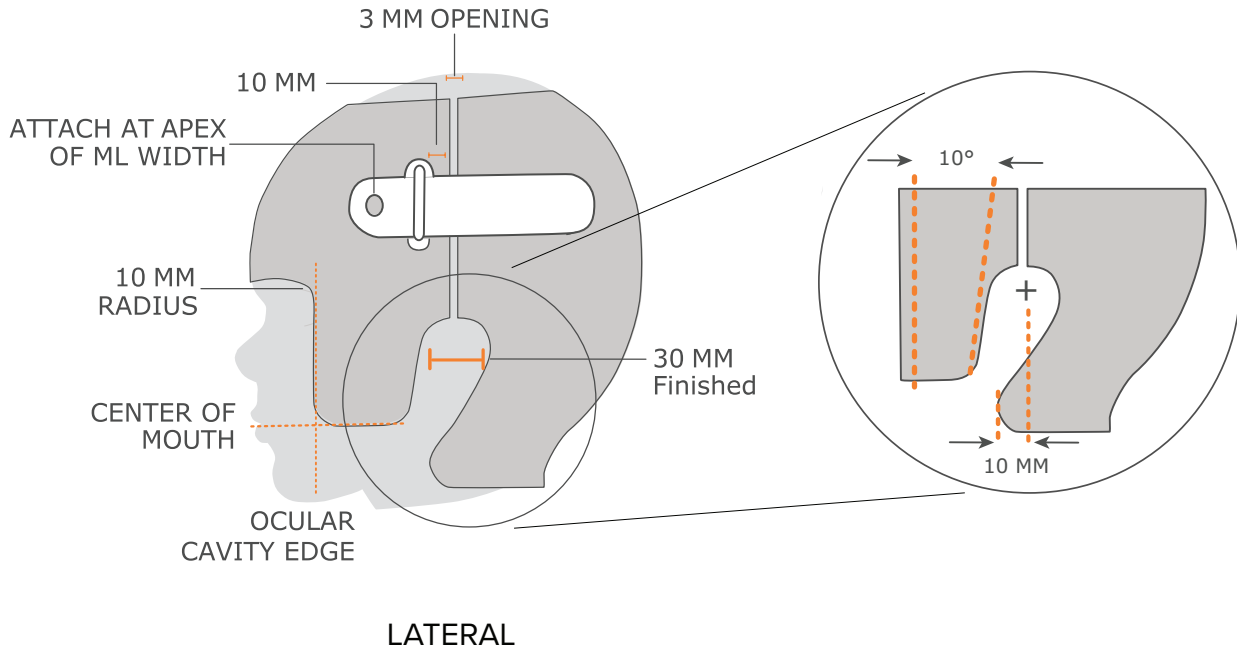


**'D' Trim**

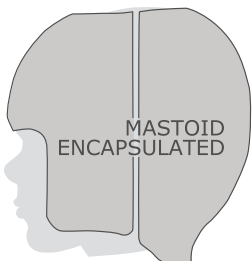
# CRO TRIM LINE VARIATIONS

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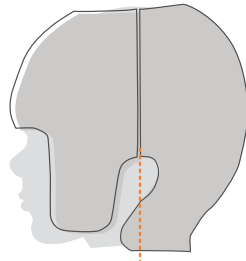
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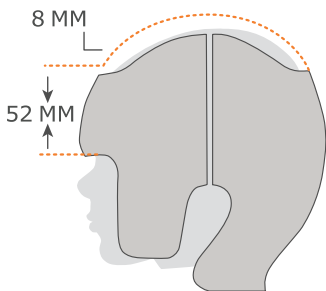
## LATERAL TRIMS



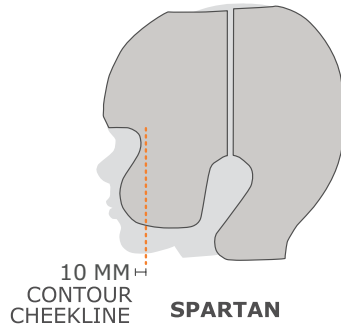
NO EAR



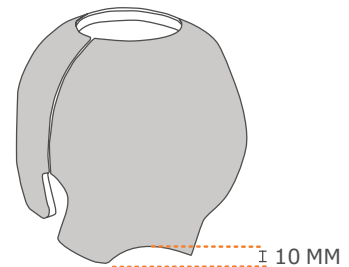
EXTENDED MASTOID



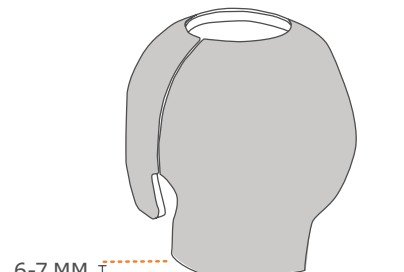
BRACHY TRIM



## POSTERIOR TRIMS



PHOENIX DISTAL TRIM



WHALETAIL DISTAL TRIM