BREMER HALO™ SYSTEM

External Bracing
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Bremer Halo™ System

Advanced Technology Working for You and Your Patients

The Bremer Halo™ System is an advanced bracing system with over 20 years of clinical usage. Designed for security, strength, and comfort, it offers ease of application and cost-effective treatment for many cervical pathologies.

Bremer’s crown and vest systems are fully MRI compatible up to 1.5 Tesla and CT compatible to the level of the crown.
3-D Crown

A Fully adjustable halo crown

• Optimized anterior pin position – Movable anterior pin sliders allow optimal medial/lateral pin positioning.

• Crown adjustments are more secure and efficient allowing:
  a) Unlimited flexion/extension range.
  b) Up to 127mm of A/P adjustment in normal cases with more available for unusual circumstances.
  c) Up to 127mm of distraction in normal cases with more available for unusual circumstances.

• One size fits all – Posterior pin holders adjust to fit various head sizes allowing one crown to fit most adults.

• Optimized pin/skull angle – Anterior pin sliders available in 0° and 12° angles to optimize pin/bone angle for straight or sloped foreheads.

• Capital arch allows a strong, solid crown without additional weight, as well as reducing posterior expansion.

• Torque Limiting Caps provide accuracy and ease of use, simplifying and shortening crown application time.*

• Unique “hinged” design enables fast, efficient full chest CPR access.

• This unique, fixation system allows below the equator posterior pin positioning, enhancing security.

*Note: For use on adult patients with sufficient bone quality only.
**HIFix™ Skull Pin**

*IMPROVED HALO SKULL PINS*

- The HIFix™ Skull Pin utilises a unique cutting head to significantly reduce bone destruction.
- As a result, HIFix™ Skull Pins provide significantly increased initial resistance to transverse loading and reduced skull pin motion at the pin site as compared to the conventional Bremer™ skull pin, (as indicated in Table 1).

- Provides the opportunity for significantly improved skull pin fixation.
- Lightweight titanium alloy design increases strength and reduces pin threading problems.*
- Knurled distraction now allows rapid, accurate Halo distraction.*
- Standard application procedure for ease of use.

*Note: For use on adult patients with sufficient bone quality only.

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**Table 1**

**Halo pin loosening: a biomechanical comparison of experimental and conventional designs.**


<table>
<thead>
<tr>
<th>Skull Pin Motion at Pin Site**</th>
<th>Failure Strength of Skull Pins**</th>
</tr>
</thead>
<tbody>
<tr>
<td>HiFix™-type skull pin</td>
<td>3.15mm</td>
</tr>
<tr>
<td>Standard skull pin</td>
<td>2010N</td>
</tr>
<tr>
<td>HiFix™-type skull pin</td>
<td>1120N</td>
</tr>
</tbody>
</table>

** and *** indicate statistical significance.
AirFlo™ Vest
A versatile Vacuum Formed Halo Vest

- Two sizes fit 98% of all adults, reducing inventory and simplifying vest selection.
- Short vest length worn at or above the xiphoid, along with soft medially placed shoulder straps allows enhanced patient range of motion while reducing skull pin stress and cervical motion.
- The superstructure is highly adjustable, producing a wedge effect which rests on major muscle groups. This offers exceptional flexibility to meet patients’ needs while remaining lightweight and strong.

- Specially engineered toothed joints are exceptionally strong and do not come loose, improving patient safety and freeing the carer from periodic retorquing of loose vest joints.

- Large posterior openings maximise ventilation, improving patient comfort and reducing potential for skin problems.
- Roll-edge construction significantly reduces redundant tissue capture, thereby improving patient comfort by allowing for a lighter weight and smaller size, while improving vest strength.
- Lightweight and slim profile, providing improved patient comfort.
**Bremer™ Classic II Vest System**

The Bremer™ Classic II vest system, compatible with all Bremer Rings and Crowns as well as Ace Trippi-Wells® and Universal Tongs®, is designed to fit most adults and provides a cost-effective alternative to the AirFlo™ vest.

**Paediatric System**

The Bremer™ Paediatric System, with two vest sizes and two ring sizes, is designed to optimize halo traction for very small children and infants.

**Adjusting Ring**

The Bremer™ Adjusting Ring is compatible with the AirFlo™, Bremer™ Classic II and Paediatric systems and provides a cost effective alternative to competitive designs.

*Note: Requires Catalogue no CLP010*
**Universal and Trippi-Wells Tongs**

The Ace tong systems are designed to provide maximum fixation for traction while providing ease of use and the ability to be attached to an Ace or Bremer Halo™ vest for mobile halo fixation.

**Kyphosis Vest**

The Bremer™ Kyphosis vest, allowing a closer approximation of patient anatomy, is specially designed to provide ease of use and flexibility of application for highly kyphotic patients.

*Note: Requires Catalogue no CLP010*
References