The PMT® Corporation’s Halo system is the most reliable, easy to use and effective Halo structure available. This Halo system is designed to provide optimal patient comfort and healing. Compared to spinal fusion, Halo fixation allows the body to naturally repair itself at a reduced cost.

The PMT Halo head ring utilizes hand wound graphite to ensure product quality and consistency. The proprietary titanium skull pins are specially designed with a parabolic tip to increase the anchoring qualities and reduces the need to retighten the pins as with other designs. The medical grade titanium, Ti 6Al-4V ELI, combined with the graphite head ring and support posts are MRI conditional at both 1.5T and 3.0T as well as CT compatible to provide the best imaging characteristics.
THE PMT® DIFFERENCE

PMT takes great pride in the quality, construction and functionality of our Halo products. The PMT Halo is the industry leading Halo because of its design, comfort, ease of installation and patient results.

HALO VEST

The PMT Halo vest is designed for patient comfort and increased compliance. The vest features:

- A malleable and trimmable vest which increases anterior and posterior compression and conforms to the patient's body shape. This provides greater comfort and patient compliance.
- A cardiac crease is incorporated into the vest, which allows the patient's chest to be accessible in emergency situations.
- Tabs and buckles for easy application
- Three adult sizes fit 95% of patients, and four pediatric sizes are available.
- Three material options for the liner:
  - Medical grade lambswool provides the greatest comfort and padding
  - Acrylic nylon is available as a hypoallergenic alternative
  - Coolmax® provides superior moisture wicking, which may be beneficial in warmer climates.
- 1223 Mdel includes dual chambered airbag with hand pump to relieve pressure on the spine.

HALO HEAD RING

- Unidirectional carbon graphite construction with titanium hardware provide superior strength and offers the highest quality MR and CT images.
- Two types of Rings in 3 sizes to fit 95% of all patient requirements.
  - Closed-Back Graphite
  - Open-Back Graphite
- Parabolic titanium pin design increases anchoring characteristics and reduces the need to retighten.
- Numerous pin site locations
- Head ring and 5 pins supplied sterile

NEOCERV® HEAD BLOCKS & SUPERSTRUCTURE

- Anterior/Posterior, Flexion/Extension, Traction/Distraction adjustments all can be made without loosening the super structure.
- 60° Flexion/Extension
- 2 to 6” of Anterior/Posterior positioning
- 1” of Traction/Distraction
- 4 point fixation with unidirectional carbon graphite support posts and titanium hardware provide superior strength while offering the highest quality MR and CT images
- Nylon ball joints to ease support post assembly and adjustment
- Traction bail may be applied to head blocks so entire application can occur while patient remains in traction

HALO MODELS

The PMT Halo System is MR Conditional and may be used safely with a patient undergoing an MRI examination under the following conditions:

- Static magnetic field of 1.5 Tesla or 3 Tesla.
- Maximum spatial gradient magnetic field of 720 Gauss/cm or less
- Normal operating mode with a maximum MR system reported, whole body average specific absorption rate (SAR) of 3.0 W/kg for 15 minutes of scanning (per pulse sequence).

In non-clinical testing, the PMT Halo System with Carbon Graphite Open Back Ring and Titanium Skull Pins produced maximum temperature rises of 0.5 degree C at a maximum MR system reported, specific absorption rate (SAR) of 3.0 W/kg for 15 minutes of MRI using a 3 Tesla MR system (Excite, General Electric).

MR Image quality may be compromised if the area of interest is in the exact same area or relatively close to the position of the Titanium Skull Pins. Therefore, it may be necessary to optimize MR Imaging parameters for the presence of these metallic implants.

Model 1214
CTLSO
**YOUTH HALO**

The PMT youth Halo is available in six vest sizes and includes either an open back ring or the more commonly used closed back ring. The complete system with an open back ring is model 1211 and the complete system with a closed back ring is model 1206. All of the pediatric Halo systems come with an extra set of pins as well as specially designed angle blocks that attach to the standard PMT Neocerv® headblock system.

**COOLMAX® LINER**

DuPont™ Coolmax® has proven physiological benefits that allow patients to stay cool and comfortable in any situation. The Coolmax® liner provides superior moisture wicking properties which provides greater patient comfort and compliance. Cotton, by comparison, absorbs 14 times more moisture than Coolmax. The Coolmax liner is also breathable and machine washable.
SIZING INFORMATION
To ensure proper fit for Halo ring and vest the following four (4) measurements need to be made: Xyphoid Circumference, Waist Circumference, Shoulder to Iliac Crest and Head Circumference.

VEST
Measurements for the vest size should be made by measuring the circumference of the chest at the xyphoid process. If the patient is borderline between two sizes, measure the circumference of the waist and the vertical distance from the top of the shoulder to the iliac crest.
- Xyphoid Circumference
- Waist Circumference
- Shoulder to Iliac Crest

Custom vest sizes are available upon request and can be shipped in 24 hours or less (in most situations). Apply the Halo ring with traction bail and put the patient into traction until the custom vest arrives. Then follow normal application procedures.

PEdiATRIC
PMT® manufactures a full line of pediatric vest sizes. When ordering a pediatric vest, extra measurements are necessary. Measure from the top of the shoulder vertically down the chest to the line of the xyphoid process. This measurement should be taken by placing the “0” of the tape measure on top of the shoulder and draping the tape down the front of the body. The reading is taken where the line of the tape reaches the level of the xyphoid.

HALO RING
Measurement for the Halo ring should be made by measuring the circumference of the patient’s head 1 cm above the eyebrow and ear. If measurement falls in between sizes order the larger size.

ADULT VEST SIZING CHART

<table>
<thead>
<tr>
<th>1233-5 WITH COOLMAX LINER</th>
<th>#1 XYPHOID CIRCUMFERENCE</th>
<th>#2 WAIST CIRCUMFERENCE</th>
<th>#3 SHOULDER TO XYPHOID</th>
<th>#4 SHOULDER TO IliAC CREST</th>
<th>#5 NECK OPENING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>24” - 31”</td>
<td>26” - 32”</td>
<td>9.5”</td>
<td>15”</td>
<td>6.5”</td>
</tr>
<tr>
<td>Medium</td>
<td>30” - 37”</td>
<td>29” - 35”</td>
<td>10”</td>
<td>15.5”</td>
<td>8.5”</td>
</tr>
<tr>
<td>Large</td>
<td>36” - 43”</td>
<td>34” - 40”</td>
<td>12.5”</td>
<td>18”</td>
<td>6.5”</td>
</tr>
<tr>
<td>XX Large</td>
<td>41” - 48”</td>
<td>36” - 40”</td>
<td>15”</td>
<td>21”</td>
<td>8”</td>
</tr>
<tr>
<td>XX Large</td>
<td>46” - 52”</td>
<td>46” - 50”</td>
<td>18”</td>
<td>24”</td>
<td>8.25”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1233-5 WITH LAMBSWOOL LINER</th>
<th>#1 XYPHOID CIRCUMFERENCE</th>
<th>#2 WAIST CIRCUMFERENCE</th>
<th>#3 SHOULDER TO XYPHOID</th>
<th>#4 SHOULDER TO IliAC CREST</th>
<th>#5 NECK OPENING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>26” - 33”</td>
<td>26” - 34”</td>
<td>11.5”</td>
<td>16.5”</td>
<td>6.5”</td>
</tr>
<tr>
<td>Medium</td>
<td>33” - 40”</td>
<td>30” - 36”</td>
<td>12”</td>
<td>18”</td>
<td>6.5”</td>
</tr>
<tr>
<td>Large</td>
<td>40” - 47”</td>
<td>30” - 42”</td>
<td>14”</td>
<td>20”</td>
<td>8”</td>
</tr>
<tr>
<td>XX Large</td>
<td>46” - 53”</td>
<td>46” - 50”</td>
<td>18”</td>
<td>24”</td>
<td>8.25”</td>
</tr>
</tbody>
</table>

PEDIATRIC SIZING CHART

<table>
<thead>
<tr>
<th>PED</th>
<th>#1 XYPHOID CIRCUMFERENCE</th>
<th>#2 SHOULDER TO XYPHOID</th>
<th>#3 SHOULDER TO IliAC CREST</th>
<th>#4 NECK OPENING</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>10” - 17” (48cm - 53cm)</td>
<td>4.25” (11cm)</td>
<td>8” (20cm)</td>
<td>3.25” (8cm)</td>
</tr>
<tr>
<td>0</td>
<td>11” - 18” (51cm - 55cm)</td>
<td>5.10” (13cm)</td>
<td>7.5” (19cm)</td>
<td>3.5” (9cm)</td>
</tr>
<tr>
<td>1</td>
<td>12” - 19” (56cm - 60cm)</td>
<td>6.12” (15cm)</td>
<td>9.5” (24cm)</td>
<td>4” (10cm)</td>
</tr>
<tr>
<td>2</td>
<td>13” - 20” (61cm - 65cm)</td>
<td>7.12” (18cm)</td>
<td>10.75” (27cm)</td>
<td>4.5” (12cm)</td>
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<tr>
<td>3</td>
<td>14” - 21” (66cm - 70cm)</td>
<td>8.12” (20cm)</td>
<td>12.25” (31cm)</td>
<td>4.5” (12cm)</td>
</tr>
<tr>
<td>4</td>
<td>15” - 22” (67cm - 73cm)</td>
<td>9” (23cm)</td>
<td>11.5” (29cm)</td>
<td>4.75” (12cm)</td>
</tr>
</tbody>
</table>

HALO RING SIZES

<table>
<thead>
<tr>
<th>TYPE</th>
<th>MODEL NUMBER</th>
<th>XX SMALL</th>
<th>X SMALL</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
<th>XX LARGE</th>
<th>XX LARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Back</td>
<td>1211-1</td>
<td>34” - 17” (86cm - 43cm)</td>
<td>16” - 19” (41cm - 48cm)</td>
<td>16” - 21” (41cm - 53cm)</td>
<td>21” - 24” (53cm - 61cm)</td>
<td>24” - 28” (66cm - 71cm)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Closed Back</td>
<td>1201-1</td>
<td>N/A</td>
<td>14” - 16” (36cm - 41cm)</td>
<td>15” - 19” (38cm - 48cm)</td>
<td>16” - 20” (41cm - 56cm)</td>
<td>20” - 24” (56cm - 61cm)</td>
<td>24” - 28” (61cm - 66cm)</td>
<td>26” (66cm)</td>
</tr>
</tbody>
</table>

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