

# PMT<sup>®</sup> HALO SYSTEMS

## C E R V I C A L   T R A C T I O N



Model 1233  
w/ Lambs Wool Liner



Model 1233  
w/ Coolmax<sup>®</sup> Liner

The PMT<sup>®</sup> 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® HEADBLOCKS & SUPERSTRUCTURE

- Anterior/Posterior, Flexion/Extension, Traction/Distractive adjustments all can be made without loosening the super structure.
  - 60° Flexion/Extension
  - 2 to 6" of Anterior/Posterior positioning
  - 1" of Traction/Distractive
- 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

# 1223 & 1233



Extended Range NeoCerv™ superstructure is adjustable in three directions.

- A/P Positioning
- Flexion/Extension
- Traction/Distracton

- Displaced buckle for clear lateral x-rays.
- Carbon graphite and titanium components provide clear MRI/CT scans.



Soft flexible material at shoulder for increased anterior/posterior compression.

Nylon ball joints for quick and easy assembly.



Shorter, tapered vest design to accommodate pendulous abdomen.

## 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.



# HOW TO ORDER

- Step 1:** Determine the Halo system and accessories you would like to order.  
**Step 2:** Measure the patient for the proper Halo system.

## 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.

## ADULT VEST SIZING CHART

### 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.

1233-5 WITH COOLMAX LINER	#1 XYPHOID CIRCUMFERENCE	#2 WAIST CIRCUMFERENCE	#3 SHOULDER TO XYPHOID	#4 SHOULDER TO ILIAC CREST	#5 NECK OPENING
Small	24" - 31" 61 - 79cm	26" - 32" 66 - 81cm	9.5" 24cm	15" 38cm	6.5" 16.5cm
Medium	30" - 37" 76 - 94cm	29" - 35" 74 - 89cm	10" 25cm	15.5" 39cm	6.5" 16.5cm
Large	38" - 44" 97 - 112cm	34" - 40" 86 - 102cm	12.5" 32cm	18" 46cm	6.5" 16.5cm
x Large	44" - 48" 112 - 122cm	38" - 44" 97 - 112cm	15" 38cm	21" 53cm	8" 20cm
xx Large	46" - 52" 117 - 132cm	44" - 50" 112 - 127cm	18" 46cm	24" 61cm	8.25" 21cm

1233-5 WITH LAMBSWOOL LINER	#1 XYPHOID CIRCUMFERENCE	#2 WAIST CIRCUMFERENCE	#3 SHOULDER TO XYPHOID	#4 SHOULDER TO ILIAC CREST	#5 NECK OPENING
Small	26" - 33" 66 - 84cm	28" - 34" 71 - 86cm	11.5" 29cm	16.5" 42cm	6.5" 16.5cm
Medium	33" - 40" 84 - 102cm	32" - 38" 81 - 97cm	13" 33cm	18" 46cm	6.5" 16.5cm
Large	40" - 46" 102 - 117cm	36" - 42" 91 - 107cm	14" 36cm	19.5" 50cm	6.5" 16.5cm
x Large	46" - 50" 117 - 127cm	40" - 46" 102 - 117cm	17" 43cm	22.5" 57cm	8" 20cm
xx Large	46" - 52" 117 - 132cm	44" - 50" 112 - 127cm	18" 46cm	24" 61cm	8.25" 21cm

## PEDIATRIC SIZING CHART

### 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.

	#1 XYPHOID CIRCUMFERENCE	#2 SHOULDER TO XYPHOID	#3 SHOULDER TO ILIAC CREST	#4 NECK OPENING
PED 00	19" - 21" (48cm - 53cm)	4.25" (11cm)	6.75" (17cm)	3.25" (8cm)
PED 0	20" - 21" (51cm - 55cm)	5.125" (13cm)	7.5" (19cm)	3.5" (9cm)
PED 1	22" - 28" (56cm - 72cm)	6.75" (17cm)	9.5" (24cm)	4" (10cm)
PED 2	22" - 28" (56cm - 72cm)	7.25" (18cm)	10.75" (27cm)	4.5" (11cm)
PED 3	22" - 28" (56cm - 72cm)	8.5" (22cm)	12.25" (31cm)	4.5" (11cm)
PED 4	26.5" - 32.5" (67cm - 83cm)	8" (20cm)	11.5" (29cm)	4.75" (12cm)

### 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.

TYPE	MODEL NUMBER	XX SMALL	X SMALL	SMALL	MEDIUM	LARGE	X LARGE	XX LARGE
Open Back	1211-1	14" - 17" (36cm - 43cm)	16" - 19" (41cm - 49cm)	16" - 21" (41cm - 53cm)	21" - 24" (53cm - 61cm)	24" - 26" (61cm - 66cm)	26" - 28" (66cm - 71cm)	N/A
Closed Back	1201-1	N/A	14" - 16" (36cm - 41cm)	16" - 19" (41cm - 48cm)	19" - 22" (48cm - 56cm)	22" - 24" (56cm - 61cm)	24" - 26" (61cm - 66cm)	26"+ (66cm+)

## HALO RING SIZES

**PMT®**  
CORPORATION  
QUALITY, INNOVATION AND CUSTOMER DRIVEN

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