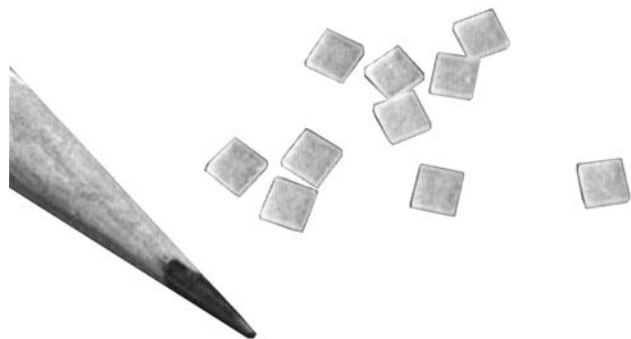


TLD, STEREOTACTIC & PERISCPIC SYSTEMS

HARSHAW TLD-100 RIBBONS (CHIPS)



Specifications

Radiations Measured: Photon - energies >5 keV,
Neutron - thermal to 100 MeV
Electron/beta - energies >70 keV

Range: 10 µGy to 1 Gy (1 mrad to 100 rad) linear
1 Gy to 20 Gy (100 rad to 2000 rad) supralinear

Tissue Equivalence: Nearly tissue equivalent

Fading: <20% in 3 months without thermal treatment and <5% in 3 months using preheat or glow curve deconvolution

Batch uniformity: ±15% STD DEV from the batch mean, tighter on special request

Residual TL Signal: <0.2% of reading, over the range, without annealing

Repeatability: for 1 mGy (100 mrad) ¹³⁷Cs doses, <2% STD DEV of 10 sequential measurements

Reuse: More than 500 per dosimeter with <10% sensitivity change

Threshold: <10 µGy (1 mrad) based on 2.26 STD DEV of 10 repeat readings of an unexposed dosimeter

Material: Lithium Fluoride LiF:MgTi

Density: 2.64 gm/cc

Size: 0.125" sq. x 0.035" (3.2 mm² x 0.9 mm)

Temperature of Main TLD Glow Peak: 195° C

Sensitivity at Cobalt 60 Relative to LiF: 1.0

Energy Response 30 keV/Cobalt 60: 1.25

Item #	Description	Quantity
155-000-10	Harshaw (TLD 100) - Ribbons (Chips)	10
155-000-50	Harshaw (TLD 100) - Ribbons (Chips)	50
155-000-100	Harshaw (TLD 100) - Ribbons (Chips)	100
155-005	Tolerance Sorting ± 5% per TLD Chip	

- Optically transparent chips
- Simulate "point detector" in medical physics applications
- Reusable hundreds of times
- Independent of dose rate up to 100 MGy/s
- Long term response retention
- Nearly tissue-equivalent
- ±15% sample-to-sample uniformity
- Repeatability to within 2% or better.

Approximate tissue equivalence

- Z - 8.14 (LiF)
- Z - 7.64 (AIR)
- Z - 7.42 (TISSUE)

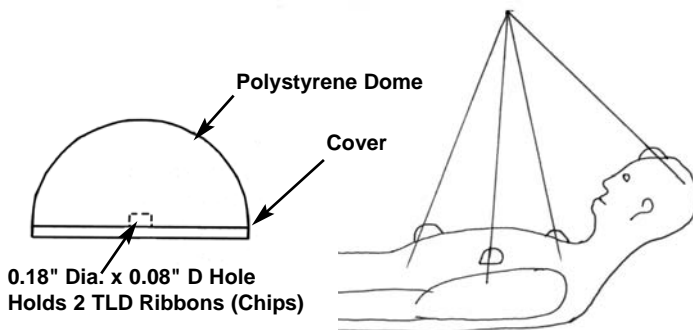
Consistent, well-controlled and repeatable procedures are key to successful TLD. Variations in annealing temperature will affect dosimeter sensitivity.

When using TLDs, vacuum tweezers should always be used. Mechanical tweezers and fingers should not be used.

POLYSTYRENE DOME TLD RIBBON (CHIP) HOLDER



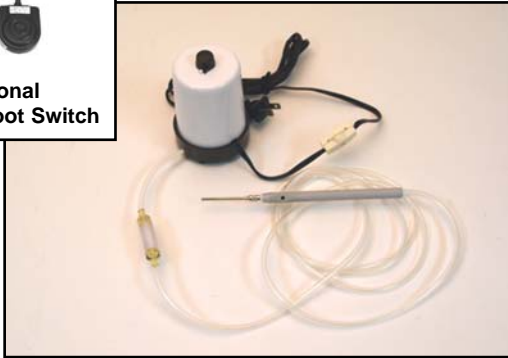
The Polystyrene Dome TLD Ribbon (Chip) Holders can be positioned at any angle on the patient during treatment, allowing the radiation to pass through the same amount of thickness. Each TLD Holder holds two 0.125" square x 0.035" TLDs. The TLD Holder includes a 0.8 mm cover.



Item #	Description	Dome Diameter	Build-Up
155-010	TLD Holder	1.2 cm	6 mm
155-020	TLD Holder	2.0 cm	10 mm
155-030	TLD Holder	3.0 cm	15 mm
155-040	TLD Holder	4.0 cm	20 mm

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

VACUUM TWEEZERS SYSTEM



The Vacuum Tweezers System allows the handling of TLDs of varying sizes without risk of damage or contamination. This system eliminates defects caused by pinching, scratching or handling when using a mechanical tweezers. An optional Remote Foot Switch (Item 906-002) is available.

Item 162-000 Vacuum Tweezers System Includes

- Compact vacuum generator with a line switch
- 4 feet of clear tubing
- Vacuum line filter
- Vacuum pen
- 3 needle tips (small, medium and large)

Specifications

Vacuum: 14" Hg.

Air Flow: 125 in.³/min.

Power: 115 VAC, 60Hz, 2 watts or 220VAC, 50Hz

Item #	Description
162-000	Vacuum Tweezer System, 115V
162-002	Vacuum Tweezer System, 220V
906-002	Remote Foot Switch for Vacuum Tweezer System

TLD PLASTIC BAGS AND BAG SEALERS



The TLD Plastic Bags are used with the Bag Sealer for sealing individual TLDs in plastic. The bags can then be placed in or on the patients by taping. Identification of TLD is accomplished by labeling or trimming the corner of the plastic bag.

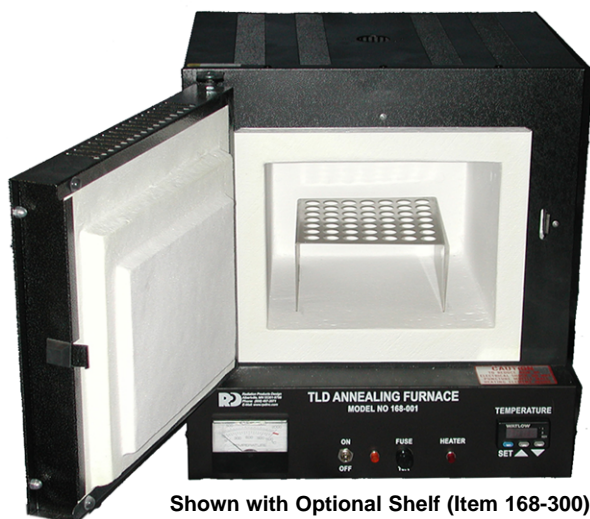
Plastic Bag Sealers are ready to use instantly - no warm up time is needed. The adjustable timer settings ensure a perfect seal for all thicknesses of bags.

Item #	Description	Size	Quantity
156-000	Black TLD Plastic Bags	1" x 3" x 0.015" (2.54 x 7.62 x 0.04 cm)	500
158-100	Clear TLD Plastic Bags	2" x 3" x 0.015" (5.08 x 7.62 x 0.04 cm)	500
161-001	Plastic Bag Sealer, 110V	4" (10.2 cm) Wide	
161-001-220V	Plastic Bag Sealer, 220V	8" (20.3 cm) Wide	

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

TLD ANNEALING FURNACE

80°, 100° and 400° C



Shown with Optional Shelf (Item 168-300)



Face of Furnace



168-300

- No over temperatures at set points of 80°, 100° or 400°C
- Large inside volume for even heat distribution
- Furnace will reach 375-425° C in less than 15 minutes
- Independent pyrometer with type K thermocouple
- Control stability of ±1° C
- Cold junction compensation
- Long-life type J thermocouple
- If thermocouple opens, unit shuts down automatically
- Heater indicator
- Power indicator, switch and fuse
- No line interference with triac zero switching
- Hospital grade plug
- Ceramic tray protects fiber floor from gouging or scratching
- Non-skid rubber feet
- Fiber hardening agent included

Utilization of this solid state, closed-loop, automatic controlling system provides faster heat-up rates to a temperature setpoint in less than thirty minutes.

A rugged 18 gauge steel cabinet has an easy access side opening door hinged on nylon with a positive latching mechanism. The stepped fiber door insulation panel is spring mounted for optimum sealing when closed. A large interior chamber provides an even temperature distribution for the aluminum planchet. All steel cabinet surfaces are electrostatically coated with high-temperature baked-on enamel.

The heart of the furnace is a rugged, lightweight molded heating unit. The insulation material is space-age alumina-silica fiber. It's molded into a tough, one piece structure with a heavy duty (14 gauge) heating element embedded in the top and three sides giving increased heat transfer. This provides even temperature distribution inside.

An integrated circuit temperature controller switches power on and off through a triac to the furnace heater. This temperature controller allows you to adjust the desired "Set" temperature. The red digital LED temperature display will indicate the furnace temperature within ±1° C.

Input to the controller is provided by a thermocouple (located in the furnace), which produces a millivolt signal representing furnace temperature. This signal is compared to a reference signal which is adjusted by the "Set" temperature. Any resultant error is amplified and conditioned to provide a switched DC logic signal to an optical coupled solid state relay using zero-cross-over firing pulses to a triac semi-conductor. This proportions power to the furnace heating unit with no line interference.

Operating Instructions

Turn the power switch to "ON". After an initial adjustment of the "Set" temperature, a red heater indicator lamp will illuminate, indicating power is being applied to the "Heater" in the furnace. A digital display indicates the furnace temperature. After the furnace heats up to the appropriate temperature, open furnace door and place TLD aluminum planchet on shelf then close door. Wait 30 seconds for thermocouple sensor to heat up to furnace temperature then turn furnace on. Leave TLD's in furnace for about 1 hour or until temperature is reached. Allow 20 minutes soaking time for aluminum planchet. Turn power off and remove planchet from furnace. Place planchet between two brass cooling plates to cool down rapidly.

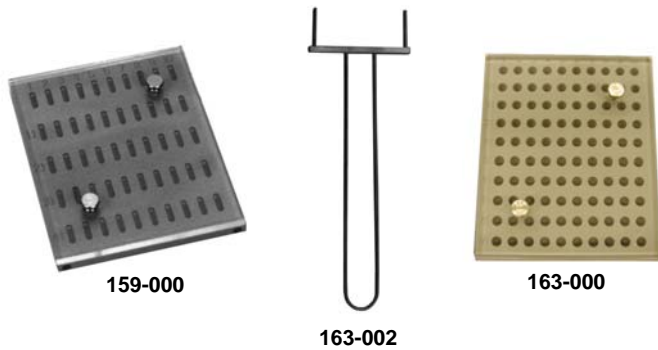
Specifications

Maximum Operating Temperature: 1100° C
Oven Dimensions: 9" W x 9" D x 6.5" H and Tapered 1/4" (22.86 x 22.86 x 16.51 cm and tapered 0.64 cm)
Overall Dimensions: 15.5" W x 15.5" D x 16.5" H (39.37 x 39.37 x 41.91 cm)
Color: Black
Power: 110-120 VAC, 50/60 Hz, 13 amps, 1460 watts
Shipping Weight: 40 lb (18.2 kg)
Optional Stainless Steel Shelf: 6" W x 6" D x 3" H (15.24 x 15.24 x 7.62 cm)

Item #	Description
168-001	TLD Annealing Furnace - 120 Vac
168-002	TLD Annealing Furnace - 220 Vac
168-300	Stainless Steel Shelf

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

TLD ROD AND CHIP ANNEALING PLANCHET



They are furnished with two holes on one end for the Planchet Handle (Item 163-002). An acrylic storage cover with two thumb screws provides a secure way to retain the chips or rods in their locations after cool down.

TLD Procedure

- Bake TLD chips at 400° C for 1 hour, then quench between Brass Cooling Plates (Item 164-000)
- Bake TLD chips at 80° C for 16 to 24 hours or 100° C for 2 hours
- Expose to radiation
- The TLD reader preheat cycle is set at 100° C
- The TLD's should be read under a low amount of nitrogen, either 1.88 SLPM (Standard Liters Per Minute) or 4 SCFH (Standard Cubic Feet Per Hour).

Specifications

Material: Anodized Aluminum

Size: 10 cm x 12 cm x 6.3 mm

Note

To clean the holes, use Q-tip® swabs. Bake the planchet for 4 hours at 400° C before using. The aluminum planchet will not deposit aluminum on the TLD chips or rods.

X The TLD Annealing Planchets are engraved with numbers 1 to 10 across the top. The rod planchet is engraved with numbers 11, 21, 31, and 41 on the side, and the chip planchet is engraved with numbers 11, 21, 31, 41, 51, 61, 71, 81 and 91 on the side, indicating chip locations.

The specially machined holes (3/16" diameter) allow good thermal contact of the rods and chips providing rapid cooling when placed between the brass cooling plate set (Item 164-000), as required by the Cameron Annealing Technique.

Item #	Description	Holds
159-000	TLD Rod Annealing Planchet with Acrylic Cover	50 (1 mm x 6 mm) Square or Round TLD Rods
163-000	TLD Chip Annealing Planchet with Acrylic Cover	100 1/8" Square Chips or 100 4.7 mm Diameter Round TLDs
163-002	Stainless Steel Planchet Handle	

BRASS COOLING PLATE SET



The Brass Cooling Plate Set is used to rapidly cool down the TLD planchet containing the TLD's. After 400° C annealing the Brass Cooling Plate Set can cool the TLD planchet to 95° in 25 seconds. The top cooling plate has a large heavy duty handle.

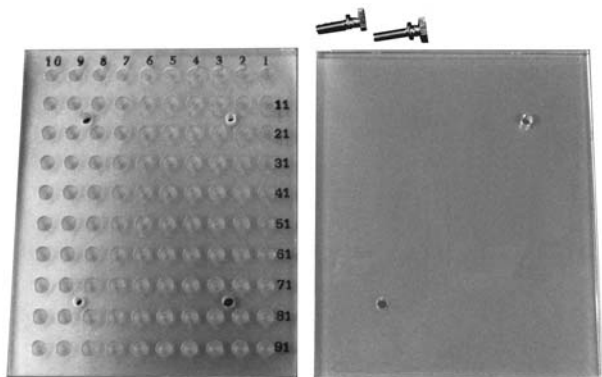
Specifications

Size: 6" L x 6" W x 1" T (15.24 x 15.24 2.54 cm)

Item #	Description
164-000	Brass Cooling Plate Set

TLD, STEREOTACTIC & PERISCPIC SYSTEMS

EASY TRANSFER STORAGE HOLDER



The TLD Easy Transfer Storage Holder provides easy transfer to the annealing planchet. The Storage Holder measures 10 x 12cm and is compatible with TLD Rod Annealing Planchet (Item 159-000) and TLD Chip Annealing Planchet (Item 163-000). The numbers on the storage holder are opposite of the planchet. The TLD Easy Transfer Storage Holder also has a cover to protect TLDs from dust.

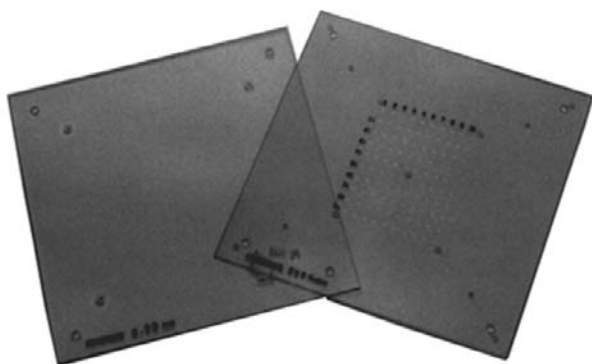
To transfer TLD's to the storage holder, line up numbers on planchet and storage holder, fasten storage holder to annealing planchet and turn over. Remove annealing planchet and fasten storage holder cover.

Item #	Description	Material	Holds
163-010	TLD Easy Transfer Storage Holder	Polystyrene	100 - 1/8" square chips or 4.7 mm diameter round chips
163-013	TLD Easy Transfer Storage Holder	Acrylic	50 - 1 mm x 6 mm square or round rods or 13 mm diameter disks

X

TLD IRRADIATION PHANTOMS

Polystyrene Phantoms



The TLD Polystyrene Irradiation Phantom consists of 2 plates. The TLD phantom is numbered 10 to 1 across the top. The left side of the TLD phantom is numbered 11 to 91 for TLD ribbons (chips) or 11 to 41 for TLD rods. This numbering matches the annealing planchet when the irradiation phantom is flipped. The area that holds the ribbons (chips) or rods is 8.5 cm x 10.5 cm centered on the polystyrene plate.

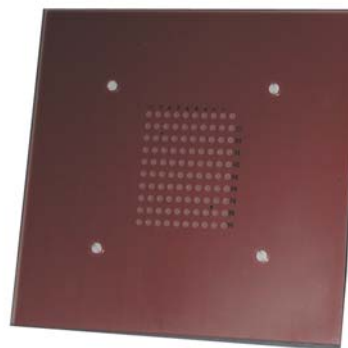
The 6 mm polystyrene cover is secured to the bottom plate which holds TLDs in the individual holes. The plates can be separated for easy cleaning.

Specifications

Size: 9/16" x 9.8" sq. (1.43 x 25 cm)

Item #	Description
165-000	Polystyrene Phantom for Ribbons (Chips)
167-000	Polystyrene Phantom for Rods

Plastic or Solid Water Phantom



The Plastic or Solid Water TLD irradiation phantoms consist of a 5 mm phantom plate and a 1/4" acrylic cover. These are numbered the same as the Polystyrene Irradiation Phantom and will hold 100 TLD ribbons (chips) or 50 TLD Rods.

Specifications

Size: 5 mm x 30 cm sq.

Item #	Description
165-005	Plastic Water Phantom for Ribbons (Chips)
165-010	Solid Water Phantom for Ribbons (Chips)
167-005	Plastic Water Phantom for Rods
167-010	Solid Water Phantom for Rods

Custom Units Available

X - 5

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

STEREOTACTIC COLLIMATOR SYSTEM



X

The Stereotactic Collimator System is custom made for each customer. The customer must select the options wanted.

The tray is made to be placed in the wedge tray slot. An X-Y translation stage tray allows for adjustment of the collimator barrel in the X-Y directions. The collimator barrel attaches to either the wedge tray or the X-Y translation stage tray.

The collimator barrel has an outside diameter of 7 cm with an inside diameter of 6.3 cm. The length of the barrel is specified by the customer. With short collimator barrels the lead collimators insert from the top of the barrel (the barrel unscrews from the tray). Long collimator barrels have a screw on bottom which is taken off to insert the lead collimator from the bottom. A test collimator will be sent to determine divergence prior to manufacturing.

Optional Accessories

X-Y pointer system (Item 1080-06), or a stereotactic front pointer (Item 1080-08). The stereotactic front pointer has a magnetic base that will attach to the collimator barrel or Item 1081-73 Stereotactic Film Holder.

The Stereotactic Film Holder has a ring clamp that mounts to the collimator barrel of the Stereotactic Collimator System. The removable rod extends past isocenter. A film holder plate slides onto the rod and is adjustable to the proper distance, a tightening screw will hold the film holder plate in place. Two spring clips on the film holder plate holds the film.

Stereotactic Collimator System Includes

- Tray
- Translation Stage Tray
- Barrel

When placing an order, please provide the following information:

- Item 1080-__
- Machine
- Machine Type
- Target to Bottom of Wedge Tray Slot in centimeters
- Target to End of Collimator Barrel in centimeters
- Contact Information

The contact person will have to verify all information prior to manufacturing.

Item #	Description
1080-20	Varian Type II, Screw Coded with X-Y Stage, Wedge Slot
1080-21	Varian Type III, Digital Coded with X-Y Stage, Wedge Slot
1080-30	Siemens Screw Coded with X-Y Stage, Wedge Slot
1080-32	Siemens Digital Coded with X-Y Stage, Wedge Slot
1080-06	X-Y Pointer System
1080-08	Stereotactic Front Pointer
1081-73	Stereotactic Film Holder

Other Manufacturers Available
Items are Custom Made and Nonreturnable

LEAD COLLIMATORS



The lead collimators have a lip at the bottom which fits into the barrel to insure proper placement of the lead collimator.

The lead collimators are custom designed for each machine based on field size, flatness, and the slope angle of the radiation penumbra edge.

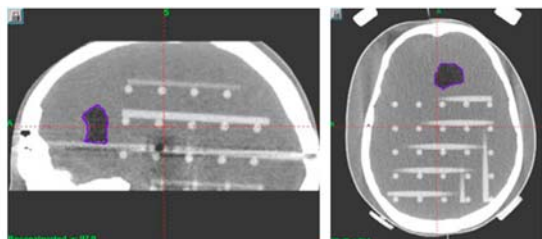
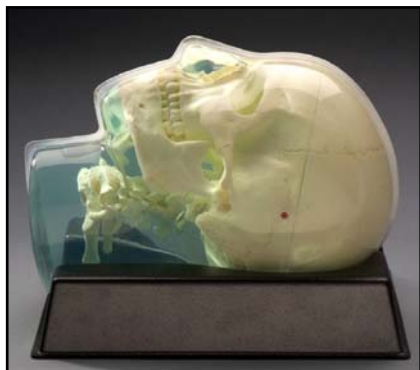
Item #	Stereotactic Lead Collimator
1081-05	Diameter at Isocenter 5 mm
1081-08	Diameter at Isocenter 8 mm
1081-10	Diameter at Isocenter 10 mm
1081-15	Diameter at Isocenter 15 mm
1081-20	Diameter at Isocenter 20 mm
1081-25	Diameter at Isocenter 25 mm
1081-30	Diameter at Isocenter 30 mm
1081-35	Diameter at Isocenter 35 mm
1081-40	Diameter at Isocenter 40 mm

Items are Custom Made and Nonreturnable

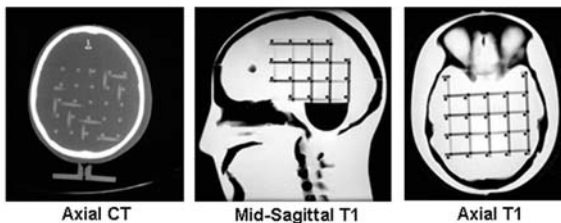
TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

3D ANTHROPOMORPHIC SKULL PHANTOM

For Rapid Assessment of Image Displacement in Gamma Knife and Other Treatment Planning Systems



Three dimensional orthogonal acrylic rod matrix through cranial volume enables assessment of image distortions



Axial CT

Mid-Sagittal T1

Axial T1

- Images well on T1, T2 and 3DTOF MRI acquisitions
- Images well on CT scans
- Stereotactic frame can be applied to special reinforced pads
- Images can be imported into stereotactic localization program
- CT scans can be used to assess MRI accuracy

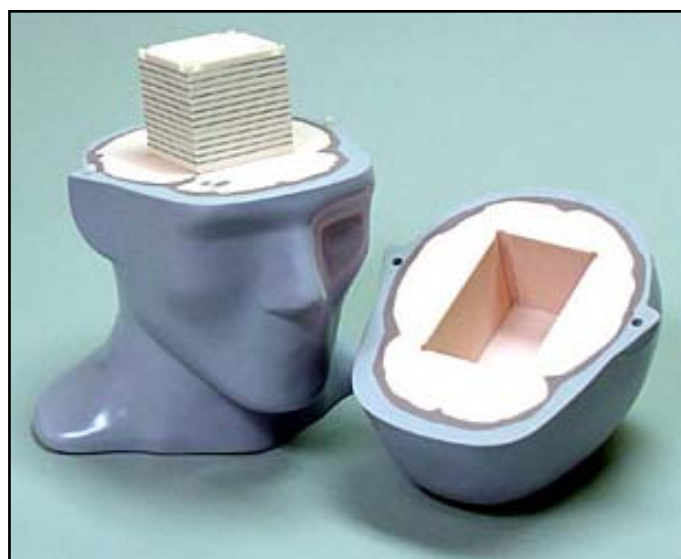
The skull phantom is made from materials which can be imaged using X-ray, CT and MR. The skull is manufactured from an epoxy-based tissue substitute. The interstitial and surrounding soft tissues are made from a proprietary water-based polymer. The gel can be formulated to accommodate specific requirements such as X-ray attenuation, contrast, and MR response. The entire phantom is encased in a vacuum formed plastic shell for ease of use and durability. The phantom includes wire or point targets in various locations and a simulated tumor.

Skull phantoms can be made to order. Contact RPD if you have a unique requirement.

Item #	Description
682-820	3D Anthropomorphic skull Phantom

RADIOSURGERY HEAD PHANTOM

For Evaluation of Treatment Accuracy



- Verification of intracranial dose distribution
- 3D isodose verification
- Commissioning and comparison of Treatment Planning Systems
- Verification of individual patient treatment plan
- Teaching tool for Gamma Knife and Radiosurgery

The Radiosurgery Head Phantom was designed to improve the accuracy of treatment plan verification in radiosurgery. It allows for 3D dose verification in a large cranial volume.

The Phantom contains average brain, bone spinal cord, vertebral disks and soft tissues mimicked with 1% accuracy for both CT and Therapy energy ranges (50 keV - 25 MeV).

The 2.5"x2.5"x2.5" Film Cassette contains 13 levels of X-Ray or Gafchromic® Film to increase accuracy of 3D dose reconstruction. It can be interchanged with an equivalent Gel Dosimetry Cassette or TLD holder. Two brain-equivalent spacers allow the user to locate the cassette in one of four different positions without breaking the consistency of the intracranial anatomy.

Item #	Description
682-800	Radiosurgery Head Phantom

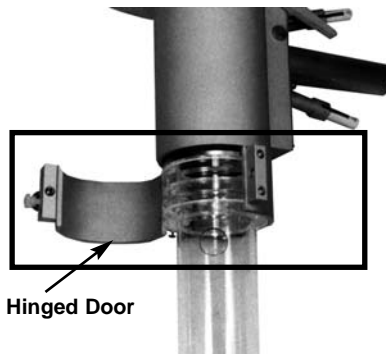
TLD, STEREOTACTIC & PERISCPIC SYSTEMS

PERISCPIC ELECTRON CONE SYSTEM

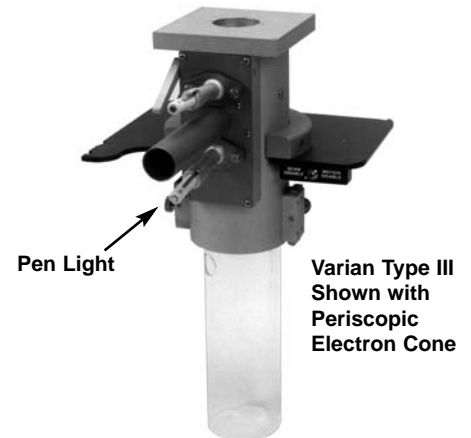
For Intraoperative or Intracavitary



1100-05



Hinged Door



Pen Light

Varian Type III
Shown with
Periscopic
Electron Cone

- Lateral docking
- Upward movement of periscopic electron cone

The periscopic viewer is used with the periscopic electron cones (Item 1100EC-1.9 to 1100EC-9.5) for intraoperative or intracavitary treatment. The periscopic viewer is made of stainless steel and clear anodized aluminum parts.

The most important feature of the periscopic viewer is the lateral docking. The bottom part of the barrel has a hinged door which opens to allow for the lateral docking of the periscopic electron cone into the viewer. The door has to be closed and secured to keep the periscopic electron cone in alignment with the beam. The periscopic electron cone can be held in place by the stainless steel locking knob.

If necessary the periscopic electron cone can slide approximately 8" into the barrel of the periscopic viewer. If the periscopic electron cone is being held in place by the locking knob this will have to be loosened to allow the retraction of the periscopic electron cone into the barrel.

Centering washers, four screws and beveled washers are used to attach the periscopic viewer to the plate that slides into the electron slot of the treatment machine. To adjust the periscopic viewer to the central axis of the beam, remove centering washers, position the periscopic viewer to central axis and using the beveled washers, tighten the screws. The centering washers keep the periscopic viewer centered to the plate.

Inside the periscopic viewer is a highly polished stainless steel mirror. The mirror is held and retracted by two independent springs. This prevents the possibility of the mirror remaining in the field if a spring should fail. A lever on the outside of the viewer adjusts the angle of the mirror for viewing through the periscopic electron cone.

At the top of the barrel of the periscopic viewer a sheet of 0.002" thick mylar® is secured to prevent any foreign matter from entering the treatment field.

On the outside of the periscopic viewer are two pen light holders which are mounted on swivel sockets. The pen lights can be adjusted to allow maximum light into the periscopic viewer and electron cone. The pen light holders can be removed to allow for a fiber optics light source. A light source can also be inserted into the 2.5 cm hole in the side of periscopic electron cones that are 3.8 cm in diameter or larger. Ceiling spotlights or flashlights can be aimed at the periscopic electron cone to transmit light to the treatment area. Located between the pen holders is the periscopic viewer tube for viewing.

Custom electronics may need to be supplied by the accelerator manufacturer. RPD will assist the customer in determining what is needed for electronics.

As a safety precaution the gantry rotation power and couch vertical drive power should be disabled or turned off just before the lateral docking into the periscopic viewer. This prevents any accidental movement of the gantry or couch.

Optional: Color Camera System includes camera with zoom lens and video monitor. Call RPD for more information.

Sterilization: Gas

When placing an order, please provide the following information:

- Item 1100-05-__
- Manufacturer
- Model
- Serial Number
- Target to Bottom of Wedge Tray Slot in centimeters
- Does the machine have a MLC
- Software Version
- Does the Machine have "Reserve E" in Physics Mode
- Contact Information

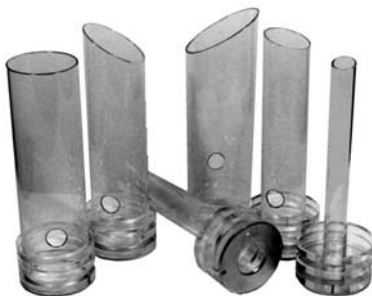
The contact person will have to verify all information prior to manufacturing.

Item #	Description
1100-05-__	Periscopic Viewer
1100-02	Replacement Mylar Window, 0.002" T (0.005 cm)
1006-00	6 Pen Lights

Items are Custom Made and Nonreturnable

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

PERISCOPIC ELECTRON CONES



The periscopic electron cones are clear acrylic cylinders which are 3.1 mm thick and 30.5 cm long. The top of each cone has three acrylic spacer rings which slide into the barrel of the periscopic viewer. When the bottom of the periscopic electron cone is flush with the end of the periscopic viewer barrel the distance from the bottom of the periscope to the center of the cone angle is 25 cm.

A 4.8 mm thick brass plate with a center hole is attached to the top of each periscopic electron cone. The brass plate collimates and prevents electrons from penetrating the acrylic spacer rings.

Periscopic electron cones that are larger than 3.8 cm I.D. diameter have a 2.5 cm diameter hole in the side of the cone. This hole allows easy access for TLD placement or a fiber optic light source.

The periscopic electron cones are available in angles of 15°, 30°, 45° and 90° or no angle. The inside diameters range from 1.9 cm to 9.5 cm.

Any of the periscopic electron cones will fit in any periscopic viewer made by Radiation Products Design, Inc.

Sterilization: Gas

Item #	Electron Cone Inside Dimension
1100EC-1.9-__*	1.9 cm
1100EC-2.5-__*	2.5 cm
1100EC-3.2-__*	3.2 cm
1100EC-3.8-__*	3.8 cm
1100EC-4.5-__*	4.5 cm
1100EC-5.1-__*	5.1 cm
1100EC-5.7-__*	5.7 cm
1100EC-6.4-__*	6.4 cm
1100EC-7.0-__*	7.0 cm
1100EC-7.6-__*	7.6 cm
1100EC-8.3-__*	8.3 cm
1100EC-8.9-__*	8.9 cm
1100EC-9.5-__*	9.5 cm

* Specify Angle (15°, 30°, 45° or 90°)

SURGICAL DUMMY CONES



The Surgical Dummy Cones are used in surgery to select the cone diameter and angle needed for treatment.

The Surgical Dummy Cones are made of 3.1 mm thick clear acrylic and are 25.4 cm long. One end of the cone is flat and the other end is angled to 15°, 30° or 45°.

It is best not to use the Periscopic Electron Cones in surgery because they could be dropped, become non-sterile, or the cone may become partially covered in blood and would obscure viewing of the field with the Periscopic Viewer.

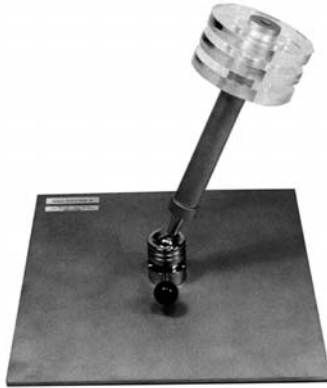
Sterilization: Gas

Item #	Surgical Dummy Cone Inside Dimension
1100SC-1.9-__*	1.9 cm
1100SC-2.5-__*	2.5 cm
1100SC-3.2-__*	3.2 cm
1100SC-3.8-__*	3.8 cm
1100SC-4.5-__*	4.5 cm
1100SC-5.1-__*	5.1 cm
1100SC-5.7-__*	5.7 cm
1100SC-6.4-__*	6.4 cm
1100SC-7.0-__*	7.0 cm
1100SC-7.6-__*	7.6 cm
1100SC-8.3-__*	8.3 cm
1100SC-8.9-__*	8.9 cm
1100SC-9.5-__*	9.5 cm

* Specify Angle (15°, 30°, or 45°) - All Cones Have One Flat End

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

PRACTICE UNIT FOR DOCKING PERISCOPIC ELECTRON CONES



The Practice Unit is placed on the treatment couch to simulate a periscopic electron cone that has been placed in a patient.

The lever allows for the movement and docking of the practice cone. The practice cone can rotate 360° and angle 35° from the vertical. The baseplate is 12 3/8" square x 1/4" thick (31.4 x 0.635 cm) aluminum with a rubber covered bottom to prevent movement on the treatment couch.

Item #	Description
1100-80	Practice Unit for Docking

X

OBTURATORS FOR PERISCOPIC ELECTRON CONES



The Obturators are used to make insertion of the Periscopic Electron Cones easier. The primary use for the obturators is for vaginal insertion.

The Obturators are made of solid clear acrylic with diameters of 1.9 to 5.1 cm. The reversible obturator cap/handle has a large and a small diameter. The 2 diameters of the cap/handle determine the insertion length of the obturator into the periscopic electron cone. This cap/handle design allows one obturator to fit all angles of the periscopic electron cones. The larger diameter end is used for the 0° and 15° angles and the smaller end is used for the 30° and 45° angles. The larger diameter end also has a groove around the side to facilitate ease in handling. A screw with a knob is used to attach the cap/handle to the obturator.

Procedure

The obturator is placed in the corresponding periscopic electron cone through the acrylic ring end, the obturator is then lubricated and inserted into the patient. The obturator is removed from the periscopic electron cone and the position is viewed through the periscopic electron cone using a flashlight. A groove the length of the obturator prevents suction when removing the obturator.

When viewing, if the position of the periscopic electron cone needs to be adjusted or changed the obturator can be reinserted to help reposition the periscopic electron cone.

Once the proper position of the periscopic electron cone is set docking to the periscopic viewer can be done. After docking the position of the periscopic electron cone should be verified using the periscopic viewer.

Sterilization: Gas

Item #	Obturator Cone Inside Dimension
1100-OB-1.9	1.9 cm
1100-OB-2.5	2.5 cm
1100-OB-3.2	3.2 cm
1100-OB-3.8	3.8 cm
1100-OB-4.5	4.5 cm
1100-OB-5.1	5.1 cm

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

VARIAN ELECTRON MINI-CONES AND ADAPTER PLATE FOR 15CM ELECTRON CONE



Item 895-400

Specifications

Energy Range: 6 MeV to 12 MeV, Transmission at 12 MeV is less than 5% outside of cone

Steel Density: 7.83 g/cm³

Brass Density: 8.515 g/cm³

Acrylic Density: 1.18 g/cm³

Adapter Plate (Items 895-400 and 895-401)

Size: 15 cm x 15 cm

Opening: 4" Diameter

Material: 1/2" Thick Steel

Finish: Nickel Chrome Plated

Sterilization: Autoclave or Gas - Sterrad NX-100

Electron Mini-Cone (Items 895-41915 to 895-47090)

Base: 3/8" Thick x 4" Diameter Brass Ring

Material: 1/8" Clear Acrylic

Sterilization: Gas - Sterrad NX-100

Item #	Description
895-400	Varian Type III 15cm Electron Cone Adapter Plate
895-401	Varian Type II 15cm Electron Cone Adapter Plate

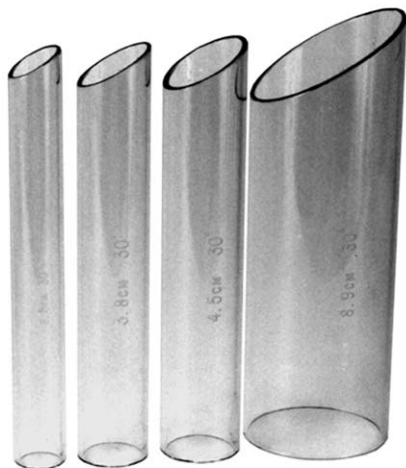
Item #	Electron Mini-Cone Inside Dimension
895-419__*	1.9 cm
895-432__*	3.2 cm
895-445__*	4.5 cm
895-457__*	5.7 cm
895-470__*	7.0 cm

*Specify Angle (15°, 30°, 45°, or 0°)

The Electron Cone Adapter Plates, Items 895-400 and 895-401, allow the 15cm electron cone to hold the Electron Mini-Cones, Items 895-41900 to 895-47045. The adapter plates are 1/2" thick steel with a nickel chrome plate finish. A 4" diameter opening in each adapter plate and three (3) spring plungers hold the brass ring base of each Electron Mini-Cone. If side or front pressure is presented, the spring plungers allow the Electron Mini-Cone to flip out.

The Electron Mini-Cones are made of 1/8" clear acrylic tubing and affixed to a 3/8" thick x 4" diameter nickel chrome brass ring base. The Electron Mini-Cones are available in diameters of 1.9 cm, 3.2 cm, 4.5 cm, 5.7 cm and 7.0 cm and can have angles of 15°, 30°, 45°, and 0° on the bottom of the Electron Mini-Cone.

DUMMY MINI-CONES



The Dummy Mini-Cones are used to select the cone diameter and angle needed for treatment.

The Dummy Mini-Cones are made of 3.1 mm thick clear acrylic and are approximately 12 cm long. One end of the cone is flat and the other end is angled to 0°, 15°, 30° or 45°.

It is best not to use the Treatment Electron Mini-Cones in clinical setting because they could be dropped.

Sterilization: Gas, Sterrad NX-100

Material: 1/8" Clear Acrylic

Item #	Dummy Mini-Cone Inside Dimension
895-519__*	1.9 cm
895-532__*	3.2 cm
895-545__*	4.5 cm
895-557__*	5.7 cm
895-570__*	7.0 cm

*Specify Angle (15°, 30°, 45°, or 0°)