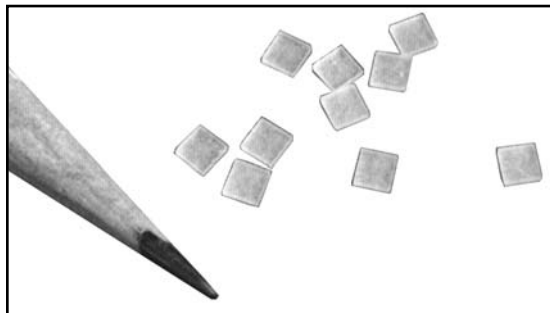


TLD, STEREOTACTIC & PERISCPIC SYSTEMS

TLD-100 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

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
155-000-1	TLD-100 Chips	1
155-000-10	TLD-100 Chips	10
155-000-50	TLD-100 Chips	50
155-000-100	TLD-100 Chips	100

- 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)

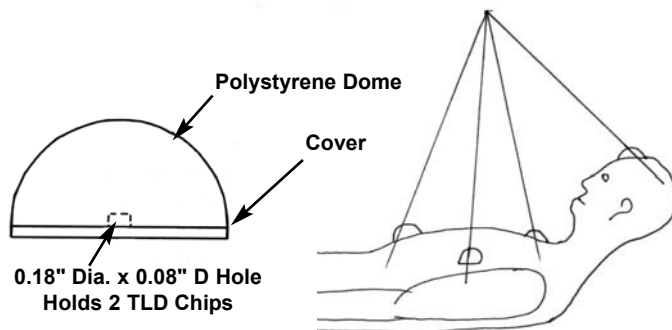
Consistent, well-controlled and repeatable procedures are key to successful TLD. Variations in annealing temperature will affect dosimeter sensitivity.

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

POLYSTYRENE DOME TLD CHIP HOLDER



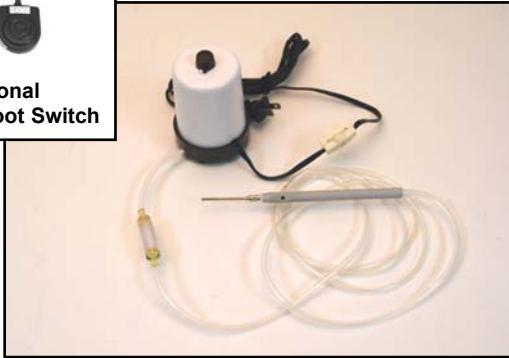
The Polystyrene Dome TLD Chip Holders can be positioned at any angle on the patient during treatment, allowing the radiation to pass through the same amount of thickness. Each TLD Holder holds two 0.125" square x 0.035" TLDs. The TLD Holder includes a 0.8 mm cover.



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.

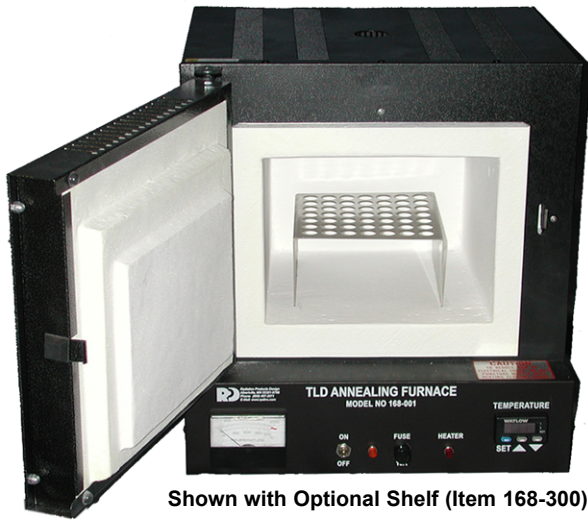
Plastic Bag Sealers are ready to use instantly - no warm up time is needed. The adjustable timer settings ensure a perfect seal for all thicknesses of bags.

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 & PERISCPIC SYSTEMS

TLD ANNEALING FURNACE

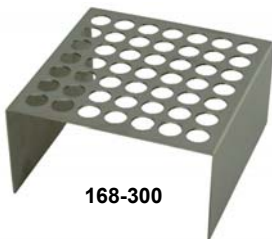
80°, 100° and 400° C



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

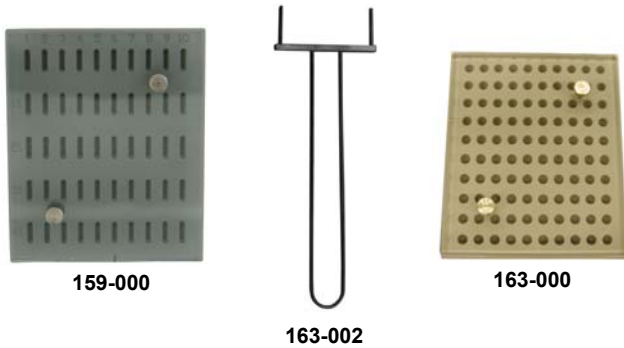
Maximum Operating Temperature: 1100° C
Oven Dimensions: 9" W x 9" D x 6.5" H and Tapered 1/4" (22.86 x 22.86 x 16.51 cm and tapered 0.64 cm)
Overall Dimensions: 15.5" W x 15.5" D x 16.5" H (39.37 x 39.37 x 41.91 cm)
Color: Black
Power: 110-120 VAC, 50/60 Hz, 13 amps, 1460 watts
Shipping Weight: 46 lb (20.9 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

X

TLD, STEREOTACTIC & PERISCPIC 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.

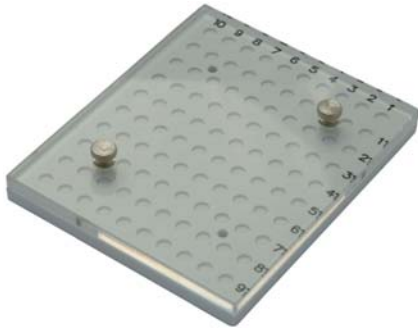
Specifications

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

TLD EASY TRANSFER STORAGE HOLDER



The TLD Easy Transfer Storage Holder provides for an 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 numbers. The TLD Easy Transfer Storage Holder also has an acrylic cover to protect TLDs from dust.

To transfer TLD's to the storage holder, line up the numbers on the 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" (3.175 mm) 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

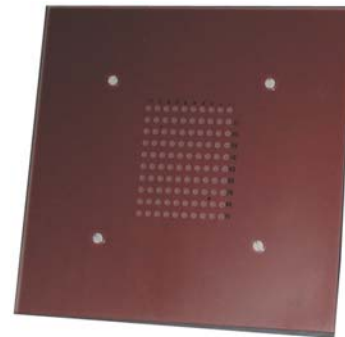
X

TLD IRRADIATION PHANTOMS

Polystyrene Phantoms



Plastic or Solid Water Phantom



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

Item #	Description
165-000	Polystyrene Phantom for TLD Chips
167-000	Polystyrene Phantom for Rods

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 chips or 50 TLD Rods.

Specifications

Size: 5 mm x 30 cm sq.

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

Custom Units Available

X - 5

TLD, STEREOTACTIC & PERISCPIC 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.

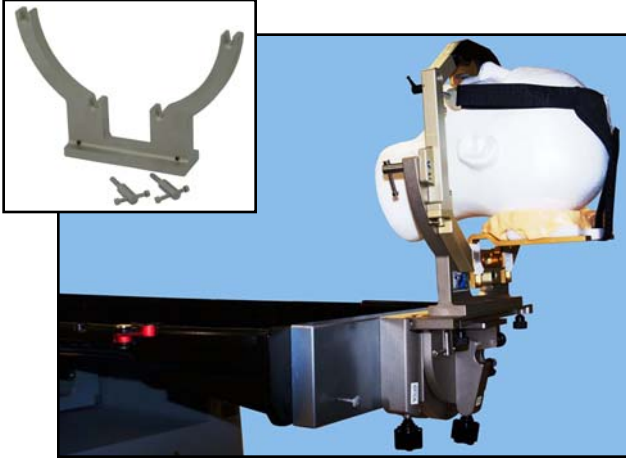
The lead collimators are custom designed for each machine based on field size, flatness, and the slope angle of the radiation penumbra edge.

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 & PERISCPIC SYSTEMS

STEREOTACTIC ADAPTER FOR VARIAN TO RADIONICS SRS HEAD FRAME



Item 1082-001 Shown with
Varian Couch and Radionics Head Frame

The Stereotactic Adapter allows for the Radionics Head Frame to be attached to a Varian Couch.

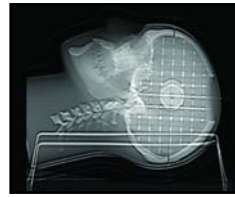
Item #	Description
1082-001	Stereotactic Adapter, Varian to Radionics SRS Head Frame

X

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

MRI DISTORTION PHANTOM FOR SRS

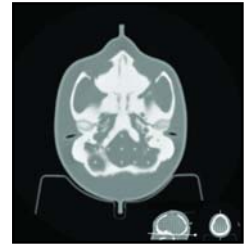
For Assessment of Image Distortion in Treatment Planning Systems



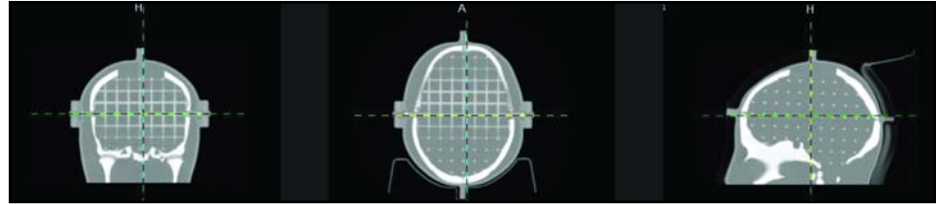
CT



MRI



CT Showing Ear Canals



CT Reconstruction

- Provides a realistic anthropomorphic scenario for CT and MR imaging
- Unique inter-cranial 3D grid design allows assessment of spatial distortion
- Special pads enable use with all fixation frames
- CT/MR markers facilitate positioning and image registration

CIRS Model 603A was designed for assessment of MR image distortion in Stereotactic Radiosurgery Planning. It is also a useful tool for verifying image fusion and deformable image registration algorithms used in various treatment planning systems. The tissue equivalent, anthropomorphic design provides the closest conditions to a clinical imaging scenario. The phantom can be imaged using X-ray, Computed Tomography and Magnetic Resonance. It images well with all MRI sequences tested to date, including T1 weighted, T2 weighted, 3D Time of Flight, MPRAGE and CISS.

The skull is manufactured from a plastic-based bone substitute, and the interstitial and surrounding soft tissues are made from a proprietary signal generating water-based polymer. The entire phantom is encased in a clear plastic shell to protect gel from desiccation. The phantom is supplied with specially designed pads that allow fixation with any stereotactic frame or mounting for end-to-end testing. The phantom is also suitable for frameless SRS QA.

The entire inter-cranial portion of the skull volume is filled with an orthogonal 3D grid of 3 mm diameter rods spaced 15 mm apart. Five extended axis-rods intersect at the reference origin of the grid. The end of each extended axis is fitted with CT/MR markers allowing for accurate positioning with lasers and co-registration of CT and MR image sets.

The phantom includes right and left air voids, 3 mm in diameter by 17 mm long to simulate each ear canal for evaluation of potential distortions commonly found in clinical settings.

682-825 Includes

- (1) 3D Anthropomorphic Skull Phantom
- (1) ABS Cradle
- (1) SRS Frame Support Cups (Set of 4)
- (1) Custom Carry Case
- (1) User Guide
- (1) 48-Month Warranty

Specifications

Overall Dimensions: 32 cm x 24 cm x 18 cm

Weight: 12 lbs (5.5 kg)

Materials

Skull: Plastic-based bone substitute

Interstitial/Soft Tissues: Water-base polymer

Grid: Reinforced nylon

Item	Description
682-825	MRI Distortion Phantom for SRS

X

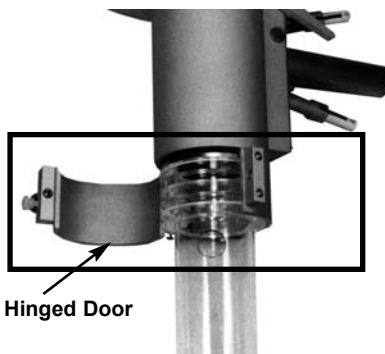
TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

PERISCOPIC ELECTRON CONE SYSTEM

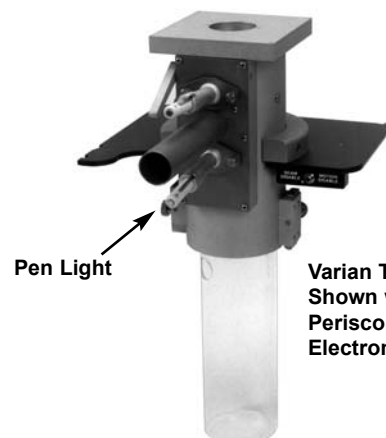
For Intraoperative or Intracavitary



1100-05



Hinged Door



Pen Light

Varian Type III
Shown with
Periscopic
Electron Cone

- Lateral docking
- Upward movement of periscopic electron cone
- For electron beam energies up to 18MeV

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.

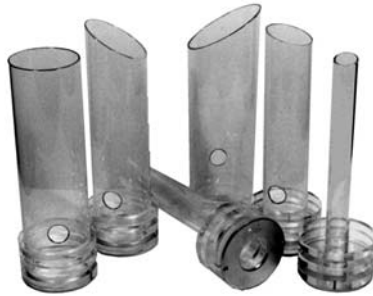
Item #	Description
1100-05-__	Periscopic Viewer
1100-02	Replacement Mylar Window, 0.002" T (0.005 cm)
1006-00	6 Pen Lights

Items are Custom Made and Nonreturnable

X

TLD, STEREOTACTIC & PERISCPIC SYSTEMS

PERISCPIC 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.

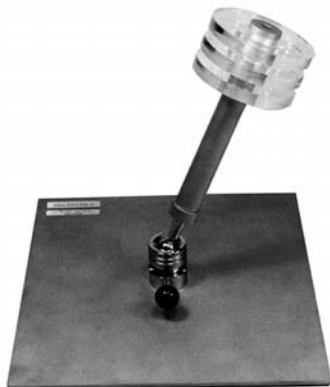
Sterilization: Gas

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 & PERISCPIC SYSTEMS

PRACTICE UNIT FOR DOCKING PERISCPIC 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

OBTURATORS FOR PERISCPIC ELECTRON CONES



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

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.

X

TLD, STEREOTACTIC & PERISCOPIC SYSTEMS

ELECTRON MINI-CONES AND ADAPTER PLATE FOR 14CM OR 15CM ELECTRON CONE



Picture shown with Adapter Plate and Electron Mini-Cone (sold separately).



895-402



895-41900

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

Size: 14 x14 cm or 15 x15 cm (5.5 x 5.5" or 5.9 x 5.9")

Opening: 4" Diameter (10.2 cm)

Material: 1.88 cm Thick Steel (0.74")

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 (0.96 x 10.2 cm)

Material: 1/8" (0.32 cm) Clear Acrylic

Sterilization: Gas - Sterrad NX-100

Item #	Electron Cone Adapter Plate
895-400	Varian Type III (with MLC) 15 cm
895-401	Varian Type II (no MLC) 15 cm
895-402	Elekta 14 cm

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 (0°, 15°, 30° or 45°)

The Electron Cone Adapter Plates allow a 14 or 15cm electron cone to hold the Electron Mini-Cones, Items 895-41900 to 895-47045. The adapter plates are 1.88 cm 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 0°, 15°, 30° and 45° on the bottom of the Electron Mini-Cone.

Isodose curves are available upon request.

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.

Specifications

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 (0°, 15°, 30° or 45°)

