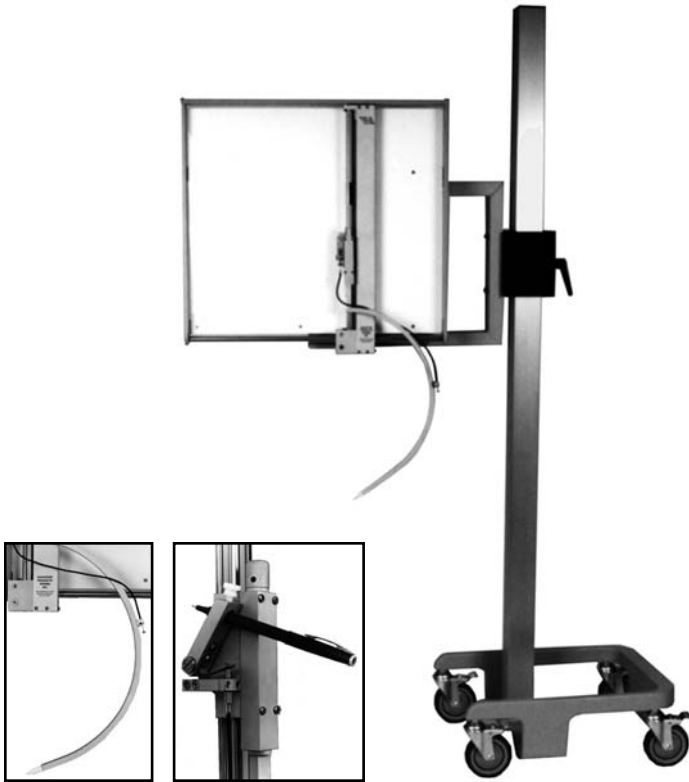


CONTOURING, BOLUS & COMPENSATION

MOBILE CONTOUR PLOTTER



- **Accepts all types of pens**
- **Finger plunger engaged pen**
- **360° rotatable drawing board**
- **Counterbalanced drawing board**
- **Counterbalanced base**

The Mobile Contour Plotter was designed as a simple system to accurately and rapidly transfer the patient's surface contour to a sheet of paper while the patient is on a simulator table or treatment table. This contour drawing can then be used on treatment planning computers and in conjunction with CT information for the treatment plan. It can be a permanent part of the patient's record.

The contour plotter has a mechanical mechanism which links a drawing pen to a stylus arm. Upon contact with the body, it translates body contours to an overhead drawing board. When the finger plunger is depressed, engaging the pen, a continuous plot is drawn as the operator follows the physical contour of the patient. Marks can be made along the contour to indicate beam entry and laser light locations.

The pen can be any type of pencil, ball point pen, or fine felt tip marker. The pen is secured in a special holder with a thumb screw so that the pen tip is about 1/2" (1.3 cm) or less from the paper. The pen to paper engagement is made through a cable by a finger controlled plunger or locked in place by a locking screw. The finger engaging system is attached to the aluminum stylus arm, allowing easy engagement of the finger plunger while following the contour with the stylus. The nylon stylus tip is not cold to the touch. It is designed to permit skin contact even in the close spacing between the table top and the patient.

The drawing board can rotate 360°. It can lock at any angle, enabling lateral and sagittal contours. The counterbalanced drawing board is easily adjustable in height to accommodate different patient thicknesses and table heights commonly encountered in radiotherapy departments.

It is recommended that computer plotting paper be used for taking contours due to its paper surface hardness and smoothness (Items 146-900 or 146-902). Other paper with the same characteristics will also work. The paper can be secured to the board with masking tape.

Four 5" (12.8 cm) diameter swivel and locking casters allow the unit to be easily positioned or transported to various areas of the department.

Maintenance Check

Routinely rotate the stylus arm around a point to check the accuracy of the white plastic tip. There should be no more than a 2 mm wobble. Check for fraying of the counterweight cable in the post once a year.

Specifications

Drawing Board Size: 26 7/8" W x 24" H (68.5 x 61 cm)

Paper Size: 21" x 24" (54 x 61 cm)

Mechanical Tolerance: 2 mm

Drawing Pen: Pencil, ball point pen, or felt tip marker with a maximum diameter of 13/32" (1 cm)

Base Size: 19" W x 24" L (48.5 x 61 cm)

Height: 82.75" (210 cm)

Weight: 187 lb (85 kg)

Shipping Weight: 230 lb (105 kg)

Item	Description
146-801	Mobile Contour Plotter

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CONTOURING, BOLUS & COMPENSATION

CONTOUR WIRE



Item	Lead Contour Wire	Weight
149-081	2.36 mm (0.093") Dia x 1 lb Spool	1 lb (0.5 kg)
149-125	3 mm (0.125") Dia x 1 lb Spool	1 lb (0.5 kg)

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AQUAPLAST RT® CUSTOM BOLUS

Density 1.1 g/cm³



Ideal for hard-to-bolus areas such as: chest wall, nose, parotid, groin, ears, and any irregularly surfaced anatomical feature. The attenuation characteristics of this product are comparable to other polymer-based products; however, its physical properties are superior.

The Aquaplast RT® Custom Bolus softens in hot water and becomes moldable just like Aquaplast. It reduces setup time, and unlike other products, it minimizes air gaps and day-to-day variability.

3.2 mm thickness is equivalent to 0.32 cm bolus.

4.8 mm thickness is equivalent to 0.5 cm bolus.

Item #	Thickness	Dimensions	Quantity
RT-1913-3	3.2 mm	30 cm x 30 cm (12" x 12")	5
RT-1908-4	4.8 mm	7 cm x 22 cm (3" x 9")	5
RT-1910-4	4.8 mm	20 cm x 23 cm (8" x 9")	5
RT-1913-4	4.8 mm	30 cm x 30 cm (12" x 12")	5
RT-1930-4	4.8 mm	43 cm x 43 cm (17" x 17")	5
RT-1931-4	4.8 mm	30 cm x 45 cm (12" x 18")	5

- No mixing, No wet gauze
- Available in sheet or pellet form
- Won't dry out or change shape

ADAPT-IT™ THERMOPLASTIC PELLETS

Density 1.1 g/cm³



Adapt-It™ Pellets soften quickly in hot water for easy shaping. Fabricate custom bolus, build-up, and bite blocks with these easy-to-mold pellets. Just pour them into a strainer (Item 878-163) then place strainer with pellets into hot water and allow pellets to turn clear. The pellets will form into a solid mass.

The mass, in its solid state, will bond to any head and neck mask or breast support to form a permanent fixture. Thus, allowing for better positioning and repositioning of bolus or build-up material.

To mold softened pellets in the patients mouth, place the pellets in a sealed plastic bag before insertion to prevent accidental bonding to dental compounds.

Item	Description	Pounds
RT-7001	Adapt-It™ Thermoplastic Pellets	1
RT-7003	Adapt-It™ Thermoplastic Pellets	3

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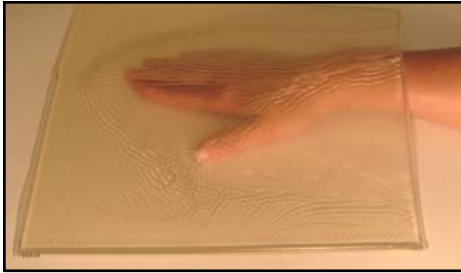
CONTOURING, BOLUS & COMPENSATION

SUPER-FLEX TRANSPARENT BOLUS (BOLX)

With (Bolx I) or Without (Bolx II) Transparent Film



Superflex Bolus
without Film (Bolx II)



Superflex Bolus
with Film (Bolx I)

- **Latex Free**
- **Calibrated**
- **Equivalent to soft tissue in radiation interaction**
- **Transparency allows visual beam location**
- **May be cut with scissors and stacked to increase thickness**
- **Unaffected by one million rads of radiation**
- **Non-allergenic and non-toxic**
- **Conforms to body contours with minimal change to thickness**
- **Easily cleaned with soap and water**
- **1.03 density**
- **1.02 electron density**

Item	Superflex Bolus without Film (Bolx II)
486-405	0.5 cm T x 30 cm sq
486-410	1.0 cm T x 30 cm sq
486-415	1.5 cm T x 30 cm sq
486-420	2.0 cm T x 30 cm sq
486-425	2.5 cm T x 30 cm sq
486-430	3.0 cm T x 30 cm sq
486-440	4.0 cm T x 30 cm sq

Superflex material is calibrated with photon and electrons in the energy range greater than 1 MeV. This assures accurate measurement and administration of the prescribed dose of radiation. Close quality control of the thickness promotes quality results time after time. The materials do not flow, creep, or sag out of shape and may be cut with scissors to fit the patient and layered as required to build up the thickness.

Ultrasound

Super-Flex is used because of its excellent ability to conform to body surfaces. As a transducer array stand off it makes a smoother surface and acts as a separator in near-surface imaging, making the imaged objects appear clearer.

Radiation Therapy

In the energy range greater than 1 MeV using photons or electrons, Super-Flex calibrations curves are available. Calibration allows greater accuracy in dosimetry and in therapy. In use, a bolus is placed over or around the irradiated area to provide build-up, energy reduction/attenuation, or extra scattering. Super-Flex conforms well to most human surfaces without significant change in thickness. The soft tissue equivalence density, approximately 1.03, results from its chemical composition which is mostly carbon, oxygen, and hydrogen.

Miscellaneous

Super-Flex is nearly the ideal material for use as the matrix for test-object phantoms. The material can also be used as missing tissue or as internal heterogeneity compensation in x-ray imaging techniques that require the compensator to be on or near the patient.

Additional Items

When using bolus on a curved area such as the chest wall, the use of Spandage (Items 674-308 through 674-312) or gauze will hold the bolus against the skin to prevent gaps.

Item	Superflex Bolus with Film (Bolx I)
486-505	0.5 cm T x 30 cm sq
486-510	1.0 cm T x 30 cm sq
486-515	1.5 cm T x 30 cm sq
486-520	2.0 cm T x 30 cm sq
486-525	2.5 cm T x 30 cm sq
486-530	3.0 cm T x 30 cm sq

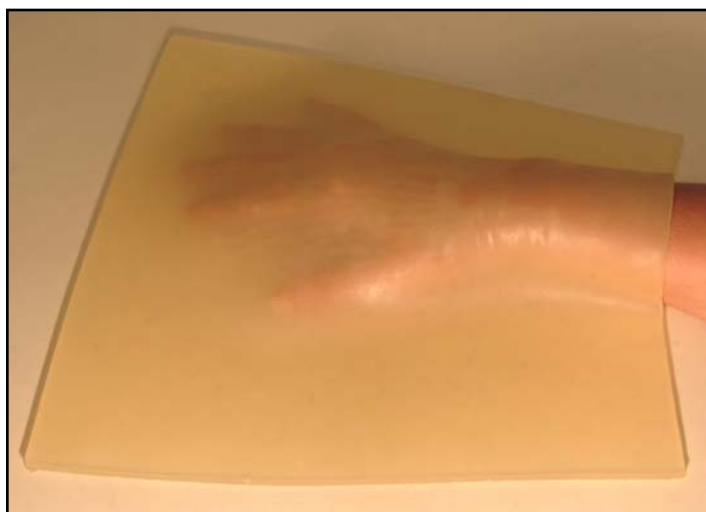
Item	Superflex Bolus with Film (Bolx I)
486-605	0.5 T x 30 x 50 cm
486-610	1.0 T x 30 x 50 cm

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CONTOURING, BOLUS & COMPENSATION

SUPERFLAB BOLUS MATERIAL

Density: 1.02 g/cm³



Superflab is exceptionally elastic, conforming to patient contours, while maintaining uniform thickness

- For enhanced dose build-up to skin
- Conforms well to patient's contour
- Very elastic and quite "flabby"
- Maintains uniformity of thickness
- Semi-transparent
- Made of synthetic oil gel
- Will not dry out
- Reusable, can be washed with soap and water
- Can be cut with scissors
- Approved for human contact

Item	Superflab Bolus
486-302	0.2 cm T x 30 cm sq
486-303	0.3 cm T x 30 cm sq
486-305	0.5 cm T x 30 cm sq
486-310	1.0 cm T x 30 cm sq
486-315	1.5 cm T x 30 cm sq

Optimal Dose Build-Up for Radiation Therapy

Superflab increases the targeted radiation dose during photon and electron treatment by providing scattering of the beam and build-up of the radiation dose at the skin surface. The unique material was designed to conform completely to a variety of uneven surface geometries, eliminating air gaps and further optimizing dose absorption.

Proven Clinical Usage

The dosimetric properties of the Superflab bolus material have been tested superior to polystyrene, the previous gold standard in bolus material, when using both photon and electron beams energies. The specific gravity of Superflab is very similar to that of water at 1.02, approximating tissue-equivalence closer than polystyrene, resulting in broad clinical acceptance. Therefore, Superflab found wide acceptance in radiotherapy clinics worldwide.

Advanced Elasticity

Superflab is made of a proprietary synthetic gel, resulting in a molded material that does not suffer inelastic strain from normal stresses. Consequently, Superflab does not have to be bagged or wrapped in plastic film to maintain its shape during treatment.

Custom sizes are available and would incur a set-up per size and per piece cost. Please contact RPDinc to request custom sizes.

Additional Items

When using bolus on a curved area such as the chest wall, the use of Spandage (Items 674-308 through 674-312) or gauze will hold the bolus against the skin to prevent gaps.

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Item	Superflab Bolus
486-320	2.0 cm T x 30 cm sq
486-325	2.5 cm T x 30 cm sq
486-330	3.0 cm T x 30 cm sq
486-340	4.0 cm T x 30 cm sq
486-370	Custom SuperFlab Bolus Set-up

ELASTO-GEL

Density 1.20 gm/cm³



Materials are frequently used in high-energy radiation therapy in order to deliver the prescribed dose to the patient's skin surface. Elasto-gel is easy to work with, reusable on the same patient, is mildly adhesive, and conforms exceptionally well to body contours. It may be easily cut with a scissors to the desired size

and shape. Standard backing is stretch cloth on one side and clear plastic on the other. The stretch backing may be removed by first moistening with a damp cloth and then peeling the cloth from the gel. Because of the self-adhesive nature of the gel pieces, they may be layered together for various thicknesses. **Note:** Single patient use only - Not to be used on multiple patients.

Item	Elasto-Gel
486-970	0.5 cm T x 30 cm sq
486-971	1.0 cm T x 30 cm sq
486-979	0.3 cm T x 20 cm x 40 cm
486-980	0.5 cm T x 20 cm x 40 cm
486-981	1.0 cm T x 20 cm x 40 cm

CONTOURING, BOLUS & COMPENSATION

SUPER STUFF BOLUS MATERIAL

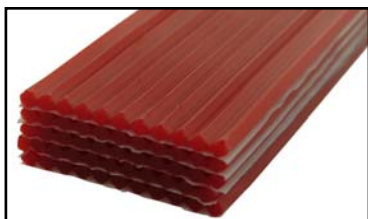
Density: 1.02 g/cm³



Super Stuff Bolus Material has a density of 1.02g/cm³. Item 489-050 is 50 - 1 ounce packages of powder which are packaged in a plastic bag with a black water fill line indicated on the bag. Item 489-100 is a 10 lb bulk package of powder. After mixing, Super Stuff takes on the consistency of Jello®. Wrap with plastic wrap and shape to fit the patient.

Item	Super Stuff Bolus Material
489-050	1 oz (0.03 kg) Packages, 50
489-100	10 lb (4.5 kg) Package, 1

RED ROPE WAX



Specifications

Size: 3/16" Dia x 11" L (0.5 x 28 cm)

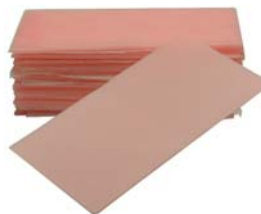
Quantity: 55 Strips

Specific Gravity (H₂O = 1): 0.90

Package Weight: 0.5 lb (0.23 kg)

Item	Description
488-001	Red Rope Wax

DENTAL BASE PLATE WAX



Specifications

Size: 0.15 x 7.5 x 14.2 cm

Quantity: 35 sheets

Specific Gravity (H₂O = 1): 0.90

Weight: 1 lb (0.5 kg)

Item	Description
933-122	Wax Sheets, 1 lb

BEEES WAX PELLETS



At 25° C or solid state, Density is 0.954 g/cc.

Specifications

Color: Bleached White

Package Weight: 5 lb (2.3 kg)

Item	Description
488-005	Bees Wax Pellets

CLEAR PLASTIC WRAP



- Made of 100% polyethylene
- High cling; low tangle

The high-cling properties of this film enables wrapping with an extraordinarily tight seal that stays in place. Low-tangle properties ensure that it won't ball up when being handled. Carton has convenient metal tear-off bar.

Specifications

Size: 12" W x 100' L (30.5 cm x 30.5 m)

Item	Description
119-750	Clear Plastic Wrap

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CONTOURING, BOLUS & COMPENSATION

WARMING PLATE AND STAINLESS STEEL CUP



933-140-1



933-140-2

The Warming Plate and Stainless Steel Cup are used for melting wax to coat eye shields.

G The wax is melted in a small stainless steel cup with a wide top on a small electric warming plate. When the wax is melted grip the eye shield with a forceps and dip into the wax for ten seconds and then remove. Constantly rotate it in all directions while the wax is cooling to prevent wax from building up in any one place. If the wax temperature is too low, it may go on the eye shield too thick and cause it to become bumpy. If the wax temperature is too high, it will not coat the eye shield evenly with a smooth surface layer.

Specifications

Item 933-140-1 Stainless Steel Cup

Capacity: 2.5 oz

Finish: Polished Stainless Steel

Item 933-140-2 Warming Plate

Heating Surface: 3.75" Diameter (9.5 cm) Non-Stick

On-Off Switch

Neon Light Indicator

Extra Long 60" (152 cm) Cord

Overall Size: 4" Diameter x 1.6" H (10.2 x 4.0 cm)

Color/Finish: White and Gray

Weight: 15 oz (0.43 kg)

Voltage: 120 V

Watts: 24 W

UL Approved

Refer to "Wax Coatings", *The Physics of Radiation Therapy* by F.M. Khan, Ph.D., under 14.6 Field Shaping part D. Internal Shielding, last paragraph on page 340.

Item #	Description
933-140-1	Stainless Steel Cup, 2.5 oz
933-140-2	Warming Plate

CONTOURING, BOLUS & COMPENSATION

BRASS MESH BOLUS



Brass Mesh Bolus can be used for post-mastectomy chest walls using 4 MV and 6 MV photons.

When placing Brass Mesh over breast and a gap is between breast, use a piece of double stick tape on the patient between the breasts to secure the brass mesh down.

When wrapping the Brass Mesh Bolus around the side of a chest wall, use a product such as Spandage (Items 674-308 through 674-312), gauze or clear plastic wrap (Item 119-750) to hold the Brass Mesh Bolus against the skin which will prevent hanging gaps.

If you are using 15MV or higher energy beam, there might be neutron activation which may increase the skin dose and/or give dose to the hands of the therapist who handles the bolus. Some patients have had skin reactions. See papers "Skin dose effects of post mastectomy chest wall etc." and " Dosimetric assessment of brass mesh bolus for postmastectomy photon radiotherapy".

The Brass Mesh Bolus can be cut with an Aviation Snips. It can be cleaned with soap and water.

Specifications

Material: Brass

Size: 18"x18" (45x45 cm)

Thickness: 1.5 mm

Tissue Equivalent Thickness: 2.0 mm

Item	Super Stuff Bolus Material
489-600	Brass Mesh Bolus 18" x 18" (45x45 cm)

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MT SPANDAGE™ ELASTIC NET Latex Free Elastic Retainer Net



When wrapping bolus around the side of a chest wall or head, use the Spandage to hold the bolus against the skin to prevent gaps.

Tubular elastic stretch net can accommodate a wide variety of medical needs involving virtually every part of the body. Size should be determined by patient's shirt size.

Item #	Size	Length Stretched
674-308	Medium Chest	10 yards
674-311	XX-Large Chest	10 yards
674-312	3X-Large Chest	10 yards

Others Sizes Available

SIEMENS WEDGE CODING PLUGS FOR .DECIMAL® BRASS COMPENSATORS

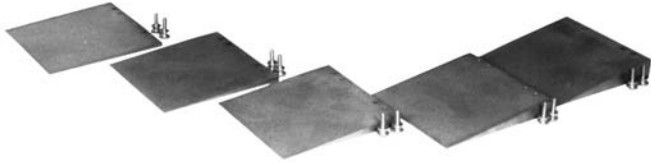


Item	Description	Quantity
1884-10-11R	Siemens 3 3/8" Wedge Coding Plug with Threaded Holes for Block Tray Slot, Specify code 1 to 18	Single
1884-10-11R-32771-01	Siemens Wedge Coding Plug S2N01 for Brass Compensator	Single
1884-10-11R-32771-02	Siemens Wedge Coding Plug S2N02 for Brass Compensator	Single
1884-10-11R-32771	Siemens Wedge Coding Plugs for Brass Compensators	Set of 18

Other Codes Available, Specify Code

CONTOURING, BOLUS & COMPENSATION

CUSTOM BRASS COMPENSATOR WEDGES



The Brass Compensator Wedges are custom made for Varian, Siemens, AECL, Philips, Toshiba, ATC, Mitsubishi, and ADAC accelerators.

Specifications

Density: 8.515 g/cm³

Composition: 61.5% Copper, 35.5% Zinc, 3.0% Lead

Item	Custom Brass Compensator Wedges
243-415	15° x W x L x H
243-420	20° x W x L x H
243-430	30° x W x L x H
243-440	40° x W x L x H
243-445	45° x W x L x H
243-450	50° x W x L x H
243-460	60° x W x L x H

Extra Charge for Compensator Trays

STORAGE CART FOR VARIAN BRASS COMPENSATORS



The Storage Cart for Varian brass compensators stores up to 88 compensators on Varian wedge trays from 9.75" wide to 10.75" wide (25 to 27.5 cm). The depth of the cart allows for the placement of two trays in each slot. The front of each rail has a mechanical stop that prevents the trays from sliding out.

The cart comes complete with sturdy handle, four corner bumpers, and four 5" (12.75 cm) lockable swivel casters.

Specifications

Overall Dimensions: 48.75" W x 50.4" H x 24" D
(124.25 x 128.5 x 61 cm)

Weight: 230 lb (105 kg)

Item	Description
880-9896	Storage Cart for Varian Brass Compensators

STORAGE CART FOR SIEMENS BRASS COMPENSATORS



The Storage Cart for Siemens brass compensators stores up to 88 compensators on Siemens wedge trays 8.75" (22.3 cm) wide. The depth of the cart allows for the placement of two trays in each slot. The front of each rail has a mechanical stop that prevents the trays from sliding out.

The cart comes complete with sturdy handle, four corner bumpers, two 5" (12.75 cm) lockable swivel casters, and two fixed casters.

Specifications

Overall Dimensions: 39.25" W x 50.5" H x 24" D
(100 x 129 x 61 cm)

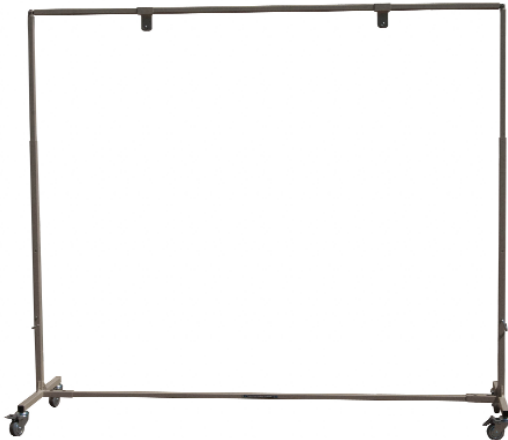
Weight: 250 lb (114 kg)

Item	Description
880-9897	Storage Cart for Siemens Brass Compensators

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CONTOURING, BOLUS & COMPENSATION

BEAM SPOILER FRAME AND BEAM SPOILERS



The Beam Spoiler Frame holds a beam spoiler for Total Body Irradiation. The frame is made of 1" (2.54 cm) square and 1.25" (3.18 cm) square steel tubing. The vertical legs are telescoping to allow a 13" (33 cm) vertical range of movement. Two hangers welded on the top horizontal bar are positioned to hold a beam spoiler in either the vertical or horizontal direction. The frame can support 1" (2.54 cm) thick (2 plates for Photons) weight up to 250 pounds (114 kg). Four 3" (7.62 cm) diameter swivel locking casters allow for easy movement of the Beam Spoiler. The frame can be dismantled for storage.

The optional Beam Spoiler is available in acrylic or polycarbonate in 0.375" (0.95 cm) or 0.50" (1.27 cm) thickness. The beam spoiler has two key holes on both the 60" (152 cm) side and on the 84" (213.4 cm) side to allow for positioning on the frame in either direction. The key holes can also be used to hang the beam spoiler from wall hooks for storage.

Specifications

Item 495-004 Beam Spoiler Frame for TBI

Overall Size: 91.5" L x 24" W x 80.375" or 93.375" H
(232.4 x 61 x 204.2 or 237.2 cm)

Finish: Durable tan textured polyurethane enamel paint

Beam Spoilers

Size: 60" x 84" (152.4 x 213.4 cm)

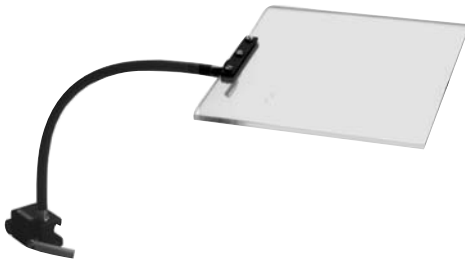
Acrylic Density: 1.185 g/cc

Polycarbonate Density: 1.2 g/cc

Item	Description
495-004	Beam Spoiler Frame for TBI

Item	Beam Spoiler	Thickness	Weight
495-005	Polycarbonate	0.375" (0.95 cm)	77 lb (35 kg)
495-006	Polycarbonate	0.50" (1.27 cm)	103 lb (47 kg)
495-007	Acrylic	0.375" (0.95 cm)	77 lb (35 kg)
495-008	Acrylic	0.50" (1.27 cm)	103 lb (47 kg)

SELF HOLDING BEAM SPOILER WITH FLEXIBLE ARM



The Self Holding Beam Spoiler has a flexible 18" (45.7 cm) or 24" (61 cm) arm that manually adjusts for easy use. The acrylic plate has an arm rotation lock that secures the acrylic plate to the desired position. The acrylic plate is 30 cm square x 0.25" (0.64 cm) or 0.375" (0.95 cm) thick and is mounted at the end of the flexible arm. The whole assembly attaches to the table rail with a rail clamp.

Specifications

Acrylic Density: 1.185 g/cm³

Item	Description
495-053-20	Siemens Flexible 18" Beam Spoiler
495-053-32	Varian Flexible 18" Beam Spoiler
495-053-50	Philips Flexible 18" Beam Spoiler
495-054-20	Siemens Flexible 24" Beam Spoiler
495-054-32	Varian Flexible 24" Beam Spoiler
495-054-50	Philips Flexible 24" Beam Spoiler

Customer to Specify Acrylic Thickness