#### PERMA-DOC PHANTOM

Compatible with VariSource® / MicroSelectron® / GammaMed® HDR Afterloading Systems



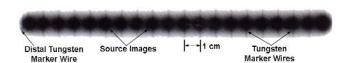
The PermaDoc Phantom is shown with the permanently embedded tungsten wire centimeter scale and removable 3mm diameter tandems.

"Your Daily Quality Assurance performed with Ease and Confidence!"

- Verifies Source Positioning and Stepping Accuracy
- · Images Centimeter Scale Directly on Film
- Requires Single Exposure Only
- · Set-up Accomplished in Seconds
- · Eliminates All Guess-Work
- Precision Built
- · Compatible with All HDR Units
- · Fulfills Documentary QA Requirements

The Perma-Doc Phantom provides the necessary permanent documentation required by the NRC quality assurance tests associated with HDR. The Perma-Doc Phantom, with its centimeter scale automatically transferred to the film by fluorescent radiation, readily identifies up to 20 source positions and their stepping accuracy. Two matching 3/8" plexi plates allow for insertion of a 10" x 12" ready-pack V-film. The film is exposed by the HDR source dwell times of one second over a maximum of 20 positions spaced 1 cm apart. The resulting film displays the source images superimposed on the image of the centimeter scale.

# Source Images are Superimposed on the Image of the Centimeter Scale



Shown is part of the V-film exposed with an HDR Ir-192 source for dwell times of 1 second over a distance of 20 cm. Source position and stepping accuracy are verified by scale lines that pass exactly through the centers of the corresponding source images. Most importantly, the first two distally located markers are spaced such as to represent the distance from tip of tandem to center of active source.

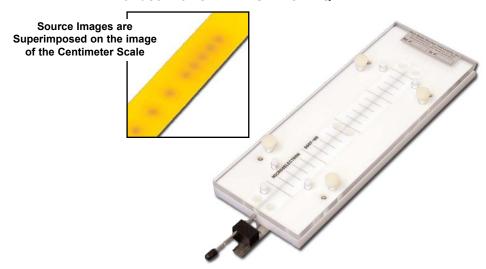
For example: Tip of tandem to center of source for the GammaMed 12i sources is 3.75mm, i.e., separation of the first two tungsten wires is 3.75mm. With the incorporation of the distal marker wire, the necessity to prick a hole into the film is therefore eliminated.

Item #	Description			
940-400-V	Perma-Doc Phantom, VariSource® HDR			
940-400-M	Perma-Doc Phantom, microSelectron® HDR			
940-400-GM	Perma-Doc Phantom, GammaMed® Plus HDR			

Connector Type: Click Fit

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# PERMA-DOC GC PHANTOM For use with GAFCHROMIC® RTQA Film



- Verifies Source Positioning and Stepping Accuarcy
- · Images Centimeter Scale Directly on Film
- Requires Single Exposure Only
- Set-Up Accomplished in Seconds
- Eliminates All Guess-Work
- · Small / Lightweight and Precision Built
- Compatible with all HDR Remote Afterloaders
- Fulfills Documentary QA Requirements
- GAFCHROMIC® RTQA Film is "Self-Developing"
- Eliminates the Need of a Darkroom
- · Film can be Handled in Room Light
- · Simple, Easy and Efficient QA Management

The Perma-Doc GC Phantom is designed to check source positioning and stepping accuracy of HDR remote afterloading systems and provides a permanent record. The Perma-Doc GC Phantom has a centimeter scale, which is projected onto the GAFCHROMIC® RTQA film by fluorescent radiation, and readily locates, up to 20 source positions.

The device consists of two plexi-glass plates stacked on top of each other with five locating pins and four knobs to ensure alignment. Four embedded ball plungers provide a space for easy insertion of the film. A 3 mm diameter groove is provided for the insertion of a straight tandem.

According to U.S. Regulatory Commission 10 CFR 35.633, source positioning accuracy on remote afterloading units is to be within  $\pm$  1 mm. Additionally, it is highly recommended to check source positioning accuracy daily or prior to HDR treatments. The test consists of 3 easy steps: insertion of GAFCHROMIC® RTQA film into PermaDoc Phantom, attachment of the source transfer tube to the PermaDoc Phantom and exposing the GAFCHROMIC® RTQA film. Due to the "self-developing" attribute of the film, the need for a visit to the darkroom is therefore eliminated.

#### **Specifications**

**Size:** 4" x 13" x 1 5/8" (10.2 x 33 x 4.2 cm) Tandem Inserted **Weight:** 1.75 lb (0.8 kg)

**Note:** The PermaDoc GC Phantom can only be used with GAFCHROMIC® RTQA film strips, Item 115-024.

	Item #	Description			
940-406-GM PermaDoc GC Phantom, GammaMed Plus® H					
	PermaDoc GC Phantom, microSelectron® HDR				
	940-406-V	PermaDoc GC Phantom, VariSource® HDR			
•	115-024	Gafchromic Film, RTQA2-111, 1.25" x 11"			

#### CT/MR SLESSINGER BOARD V2.0 FOR HDR BRACHYTHERAPY









- CT and/or MR Compatible
- Easy to Clean

The Slessinger Board is a padded sliding board that is CT and MR compatible. It is designed to facilitate HDR brachytherapy, specifically for pelvic treatments. The patient can be transferred onto the board from the operating room couch and remain on the board in recovery, during imaging for planning and until the HDR treatment is given. The intent is to minimize patient movement to ensure that the imaging for planning is not compromised by patient leg movement prior to treatment and thus delivering the treatment plan faithfully. The legs are slightly elevated, affording ready access to the perineum and preventing applicators from resting against anything. Leg elevation is maintained with the use of two (2) tightening knobs at the end of the elevation panels. Transfers on and off CT/MR/simulator couches are relatively easy due to the smooth plastic bottom surface and side handles. The board is also very useful when a patient is transferred via ambulance from the surgical facility to the treatment facility.

The CT/MR Slessinger Board V2.0 for HDR Brachytherapy has the additional benefit of having a hinged flexi-split to allow raising the head when on a stretcher. This version also includes heel cushions for additional patient comfort.

Image guided HDR brachytherapy is gaining in prominence. Prostate and gynecological applications are reliant on patient stability and comfort between the acquisition of imaging for planning and treatment. Although the Slessinger Board was devised to facilitate precise prostate HDR brachytherapy its application for image guided GYN HDR is also very significant with increasing reliance on DVH analyses. The concept of limiting rotation of a multichannel APBI balloon is yet another possible application, by avoiding the patient walking between imaging and treatment prior to each treatment fraction. The rationale and description of the Slessinger Board has also been described in the Brachytherapy Journal article by Slessinger, entitled "Practical considerations for prostate HDR brachytherapy", published early in 2010.

The Slessinger Board can be easily cleaned with non-caustic germicidal cloths or sprays. Patients may not be carried on the Slessinger Board, but rather are transferred directly from one support to another.

MR Safe

#### **Specifications**

**Base Dimensions:** 21" W x 72" L x 0.75" T (53.3 x 183 x 1.9 cm)

Base Material: Corrugated polypropylene

**Pad Dimensions:** 20.5" W x 69" L x 1.5" T (52.3 x 175 x 3.8 cm)

Pad Material: Vinyl coated closed cell foam Assembled Board Weight: 26 lb (11.8kg)

Weight Limit: 350 lb (159 kg)

Item	Description				
946-004	CT/MR Slessinger Board V2.0 for HDR Brachytherapy				

# ADJUSTABLE HOLDER WITH SLESSINGER COMPATIBLE BOARD FOR DILATORS WITH STEM SCALE



The Adjustable Holder with Slessinger Compatible Board for Dilators with Stem Scale was designed to be used when treating anal cancer in females with chemoradiation. The dilator is used to delineate and displace the vulva and lower vagina away from the primary tumor with the intention of decreasing dose to these areas.

The verticle post scale on the holder ranges from 4.5cm to 16cm and allows for reproducing from day to day the vertical position of the dilator. The dilator can also be angled up or down in the anterior - posterior position with a scale marked every 5° to 45° and a locking thumb screw. All dilators are 6.5" (16.5cm) long not including the stem. The included dilators have a scale on the stem that ranges from 1cm to 7cm which is used for depth.

This holder board included is made from HDPE Blue Polyethylene Colorboard and has a 6" titanium rail. A rail block allows the dilator holder to slide forward and backward when positioning as well as being removable from the rail itself.

This item is compatible with the Slessinger Board System (Item # 946-004).

Item 946-210 includes only the Holder and board.

#### **Specifications**

Item 946-210

**Vertical Post Scale:** from 4.5 cm to 16 cm with black markings every 0.5 cm and whole numbers every centimeter starting at 5.0

cm

Angle Scale: Marked every 5° to 45°

Material: Ertalyte

Clamp: Dual clamps with thumb screws allow for vertical and

anterior-posterior angle adjustment of the dilator

Post Assembly Material: Ertalyte

**Board Size:** 5.5" W x 16" L x 0.25" Thick (13.8 x 40.6 x 0.6cm)

**Handle Cutout:** 4" W x 1" L (10.1 x 2.5 cm)

Board Material: HDPE Blue Polyethylene Colorboard

Sterilization: Autoclave or gas

**CT/MR Conditional** 

Items 946-220 to 946-235

Material: Nylon

Overall Length: 10" (25.4 cm)

Dilator Length: 6.5" (16.5 cm), not including stem

CT/MRI Safe

Item #	Description
946-210	Adjustable Holder & Slessinger Compatible Board for Dilators with Stem Scale
946-220	20 mm Dia. Nylon Dilator with Stem Scale
946-225	25 mm Dia. Nylon Dilator with Stem Scale
946-230	30 mm Dia. Nylon Dilator with Stem Scale
946-235	35 mm Dia. Nylon Dilator with Stem Scale

# CS-137 DOT SOURCE TRANSPORT PIG CONTAINER Rental Only



The Cesium-137 DOT Source Transport Pig Container provides for safe temporary storage and transport of up to nine (9) Cesium-137 tube sources. The set consists of a pail with a cover and handle for carrying, foam insert, stainless steel container and cap, lead pig with nine holes for sources and a lead cap. Item 067-650 is for rental only. Rental time is 30 days.

#### **Specifications**

Maximum Source Size: 3.17 mm Diameter x 30 mm L

Pig Cap: 37 mm Lead
Pig Sides: 35 mm Lead
Pig Bottom: 30 mm Lead

Stainless Steel Container: 29 mm bottom

Weight: 35 lbs (16 kg)

Item	Description		
067-650	Cs-137 DOT Source Transport Pig Container		

**RENTAL ONLY** 

#### HANDLING INSTRUMENTS



Item #	Description
970-439	10" Curved Forceps
970-440	10" Tweezers for 1/8" (3mm) Dia. Source Handling
970-4402	12" Tweezers for 1/8" (3mm) Dia. Source Handling
970-441	10" Tweezers
970-442	12" Tweezers
970-443	6.5 " Reverse Action Tweezers with Groove
1006-01	5 1/2" Scissors

#### **HOLDING FORCEPS**



Item #	Forceps
970-952	Straight, Serrated, 9 1/2"
970-960	Curved, Serrated, 9 1/2"
970-978	Straight, Smooth, 9 1/2"
970-986	Curved, Smooth, 9 1/2"

#### **NYLON DILATORS**



The Nylon Dilator has one elliptical radius end and one full rounded end. The dilator is 10" long and very durable. It is made from an impact resistant material that can stand up to wear and abrasion.

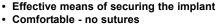
Sterilization: Autoclave or Gas

These can be used in CT and MR.

Item #	Nylon Dilator
970-656-10	10 mm Diameter
970-656-15	15 mm Diameter
970-656-16	16 mm Diameter
970-656-20	20 mm Diameter
970-656-23	23 mm Diameter
970-656-25	25 mm Diameter
970-656-26	26 mm Diameter
970-656-30	30 mm Diameter
970-656-35	35 mm Diameter
970-656-40	40 mm Diameter
970-656-45	45 mm Diameter
970-656-50	50 mm Diameter

L-6

#### **RADIATION IMPLANT BRIEF**



No skin irritation - no tape

Maintains patient dignity

· Reduces staff exposure to radiation

The radiation implant brief will accommodate LDR and HDR gyn brachytherapy applicators. The brief is made of a soft cotton lycra spandex and is sized according to a womens standard undergarment size. A slit in the fabric allows the physician to insert the applicator and catheters and to pack the vaginal cavity with gauze. The implant is held in place by a strap that goes between the leg from front to back.

The brief is comfortable for the patient as no labia sutures or tape are needed. The brief covers the patient genitalia and perineum which helps maintain the patient's dignity.

Item #	Radiation Implant Brief						
970-055	2X, Fits 51-53" Hips (underpant 10)						
970-056	3X, Fits 54-56" Hips (underpant 11)						
970-057	4X, Fits 57-59" Hips (underpant 12)						
970-058	5X, Fits 60-62" Hips (underpant 13)						

Item #	Radiation Implant Brief
970-050	S, Fits 36-38" Hips (underpant 5)
970-051	M, Fits 39-41" Hips (underpant 6)
970-052	L, Fits 42-44" Hips (underpant 7)
970-053	XL, Fits 45-47" Hips (underpant 8)
970-054	1X, Fits 48-50" Hips (underpant 9)

#### MR/CT MULTIPURPOSE COLLAR CLAMPS





Secure one end of the the Velcro to Brief, then insert other end through slot in clamp and secure back to velcro.

Our Collars Clamps are produced in sizes ranging from 10mm to 50mm diameter corresponding with the diameters of our available nylon dilators and vaginal cylinders. Other sizes not listed in that range can be made to order by request.

Item	Description
977-6210	MR/CT Multipurpose 10mm Dia. Collar Clamp
977-6215	MR/CT Multipurpose 15mm Dia. Collar Clamp
977-6216	MR/CT Multipurpose 16mm Dia. Collar Clamp
977-6220	MR/CT Multipurpose 20mm Dia. Collar Clamp
977-6223	MR/CT Multipurpose 23mm Dia. Collar Clamp
977-6225	MR/CT Multipurpose 25mm Dia. Collar Clamp
977-6226	MR/CT Multipurpose 26mm Dia. Collar Clamp
977-6230	MR/CT Multipurpose 30mm Dia. Collar Clamp
977-6235	MR/CT Multipurpose 35mm Dia. Collar Clamp
977-6240	MR/CT Multipurpose 40mm Dia. Collar Clamp
977-6245	MR/CT Multipurpose 45mm Dia. Collar Clamp
977-6250	MR/CT Multipurpose 50mm Dia. Collar Clamp

Other collar clamp diameter sizes available at request ranging from 11 to 50 mm at 1 mm increments

RP	RPD Intravaginal Device Collar Clamp Dia. Chart						
Diameter	Coller Clamp*	Nylon Dilator	Nylon Dilator w/ Stem Scale	HDR Vaginal Cylinder	Acrylic Vaginal Cylinder	Device Accessories	
10mm		970 656 10				Item #	Velcro Strapping
15mm	977-6215	970-656-15		977-3161, 977-3162, 977-3163, 977-31635		977 600	Velcro, 3/8", White, 25 yds., Hook & Loop
16mm	977-6216					Item #	Radiation Implant Briefs
20mm	977-6220	970-656-20	946-220	977-3204		970-050	S, Lits 36-38" Higs (underpant 5)
23mm	977-6223			977-32345	977-6723	970-051	M, Fits 39-41" Hips (underpant 6)
25mm	977 6225	970 656 25	946 225		977 6725	970 052	L, Fits 42 44" Hips (underpant 7)
26mm	977 6226			977 3265, 977 3266		970 053	XL, Fits 45 47" Hips (underpant 8)
30mm	977 G230	970 656 30	946 230		977 6730	970 054	1X, Fits 48 50" Hips (underpant 9)
35mm	977-6235		946-235			970-055	2X, Fits 51-531 Hips (underpant 10)
40mm	977-6240	970-656-40				970-056	3X, Fits 54-56" Hips (underpant 11)
45mm	977-6245	970-656-45				970-057	4X, Lits 57-59° Hips (underpant 12)
50mm	977-6250	970-656-50			977-6750	970-058	5X, Lits 60-62" Hips (underpant 13)
"Other co	*Other collar clamp diameter sizes available at request ranging from 15 to 50mm at 1mm increments						

#### VELCRO, WHITE HOOK & LOOP 3/8" x 25 yds.



The velcro is used to secure HDR cylinders with Collar Clamp to Radiation Implant Brief (970-050 to 970-058)

Item	Description
977-600	Velcro, White Hook & Loop 3/8" x 25 yds.

#### STAINLESS STEEL ARTICULATING ARM, BOARD AND CLAMP



- · Board is tapered at patient end for patient comfort
- · Cutout handle for easy removal

The Articulating Arm Board was designed to hold a HDR Nucletron, HDR Varian, HDR Eckert & Zigler, FSD LDR Applicators, Vaginal Cylinder, Tandems or other objects securely in place during for GYN brachytherapy treatment.

The treatment applicator is placed into the patient and the tapered end of the board is slid under the patient. The articulating arm rail block is slid onto the board rail and the applicator clamp is adjusted to fit onto the applicator and locked. The articulating arm and rail block are then locked into place.

The applicator clamp is fixed to one arm of the articulating arm and the other arm is fixed to the rail block. The rail block slides onto the 3" long board rail and is locked in position with the thumb screw.

The Articulating Arm has two (2) arms that can rotate 360°. The end of each arm has a cutout swivel that houses a ball stud and allows for another 360° of rotation. A wing knob in the center of the arms locks the positon of both arms and the swivel ball ends.

#### **Specifications**

Base Size: 5.5" W x 20.5" L x 0.25" Thick (13.8 x 52.1 x 0.6 cm)

**Handle Cutout:** 4" W x 1" L (10.1 x 2.5 cm) **Material:** HDPE Blue Polyethlyene Colorboard

**Articulating Arm Size:** 

Arm length including Ball Stud: 12.2 cm

Overall Size with arms at 180°: 27 cm W x 6 cm H

Material: Stainless Steel

Item #	Description
978-6031	Articulating SS Arm, Board & Nucletron Clamp for Tandems 101040-03 & # 101005-03
978-6032	Articulating SS Arm, Board & Varian Clamp
978-6033	Articulating SS Arm Board & Eckert & Ziegler Clamp
978-6034	Articulating SS Arm Board & FSD & Weeks Clamp

#### **VERTICAL RAIL SUPPORT**



The vertical rail support is used to position the aritculating arm from the patient's side. The vertical rail allows for clearance over the leg. This is fixed to the rail block that slides onto the rail on the base board and the articulating arm attaches to the vertical rail.

#### **Specifications**

Height: 0.475"/0.30" W x12.5" H

Material: Stainless Steel

Item	Description
978-601	Vertical Rail Support 12 1/2"

#### MR TITANIUM FLEX ARM, BOARD & CLAMP



- · Board is tapered at patient end for patient comfort
- · Cutout handle for easy removal

The MR Flex Arm was designed for use in an MR to hold a HDR Nucletron, HDR Varian, HDR Eckert & Zigler, FSD LDR Applicators, Vaginal Cylinder, Tandems or other objects securely in place during GYN brachytherapy treatment.

The treatment applicator is placed into the patient and the tapered end of the base is slid under the patient. The Flex Arm rail block is slid onto the board rail and the applicator clamp is adjusted to fit onto the treatment applicator and locked. The Flex Arm and rail block are then locked into place.

The aluminum vertical post allows the Flex Arm to rotate 360° and has vertical markings every half centimeter from 3 cm to 15 cm. The wing knob on the vertical post clamp locks the vertical, rotational and in/out postion of the Flex Arm. Slightly tightening the post wing knob will lock the vertical and rotational positon of the Flex Arm while still allowing in/out travel of the Flex Arm. The wing knob at the end of the Flex Arm locks the swivel of the applicator clamp. Loosen the Flex Arm wing knob to adjust the swivel of the applicator clamp into position and attach to the treatment applicator. When attached to the treatment applicator tighten the applicator clamp thumb screw and then tighten the Flex Arm wing knob at the end of the Flex Arm. Then tighten the post wing knob to lock in/out postion of the Flex Arm.

The applicator clamp end of the Flex Arm has a cutout swivel that houses a 1 cm diameter ball stud and allows the applicator clamp 360° of rotation. Thumb screws lock the clamp and the board rail block.

#### **Specifications**

Base Size: 5.5" W x 20.5" L x 0.25" Thick (13.8 x 52.1 x 0.6 cm)

Handle Cutout: 4" W x 1" L (10.1 x 2.5 cm)

Material: HDPE Blue Polyethlyene Colorboard

Flex Arm Size: Arm Height: 16.2cm

Flex Arm Material: Titanium

Vertical Post Material: Black Aluminum

Item #	Description
978-6051	MR Titanium Flex Arm, Board & Nucletron Clamp for Tandems 101040-03 & # 101005-03
978-6052	MR Titanium Flex Arm, Board & Varian Clamp
978-6053	MR Titanium Flex Arm, Board & Eckert & Ziegler Clamp
978-6054	MR Titanium Flex Arm, Board & FSD & Weeks Clamp

#### ADJUSTABLE HOLDER WITH BASE FOR DILATORS AND DILATORS WITH STEM SCALE



This CT/MR Safe Adjustable Holder with Base for Dilators with Stem Scale was designed to be used when treating anal cancer in females with chemoradiation. The use of a dilator is used to delineate and displace the vulva and lower vagina away from the primary tumor with the intention of decreasing dose to these areas.

The verticle post scale on the holder ranges from 2.5cm to 15cm and allows for reproducing from day to day the vertical position of the dilator. The dilator can also be angled up or down in the anterior - posterior position with a scale marked every 5° to 45° and a locking thumb screw. All dilators are 6.5" (16.5cm) long, not including stem. The dilators have a scale on the stem that ranges from 1cm to 7cm which is used for depth.

Because the base that this item includes is made entirely from ertalyte plastic, it is completely CT/MR safe. The base can be set into position in the vacuum cushion that is used for positioning the patient legs. This will give a reproducible base location on a daily basis.

Item 946-200 includes only the Holder and base.

#### **Specifications**

Item 946-200

Base Size: 3" x 5" x 0.5" Thick (7.6 x 12.7 x 1.27 cm)

**Vertical Post Scale:** From 2.5 cm to 15 cm with black markings every 5 mm and whole numbers every centimeter starting at

3.0 cm

Angle Scale: Marked every 5° to 45°

Clamp: Dual clamps with thumb screws allow for vertical and

anterior-posterior angle adjustment of the dilator **Post Assembly and Base Material:** Ertalyte

Sterilization: Autoclave or gas

**CT/MRI Conditional** 

Items 946-220 to 946-235

Material: Nylon

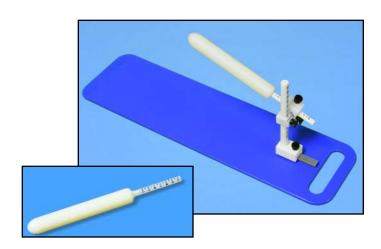
Overall Length: 10" (25.4 cm)

Dilator Length: 6.5" (16.5 cm), not including stem

CT/MRI Safe

Item #	Nylon Dilator
946-200	Adjustable Holder with Base for Dilators with Stem Scale
946-220	20mm Dia. Nylon Dilator with Stem Scale
946-225	25mm Dia. Nylon Dilator with Stem Scale
946-230	30mm Dia. Nylon Dilator with Stem Scale
946-235	35mm Dia. Nylon Dilator with Stem Scale

#### ADJUSTABLE HOLDER WITH BOARD FOR DILATORS AND DILATORS WITH STEM SCALE



The Adjustable Holder with Board for Dilators with Stem Scale was designed to be used when treating anal cancer in females with chemoradiation. The dilator is used to delineate and displace the vulva and lower vagina away from the primary tumor with the intention of decreasing dose to these areas.

The vertical post scale on the holder ranges from 4.5cm to 16cm and allows for reproducing from day to day the vertical position of the dilator. The dilator can also be angled up or down in the anterior - posterior position with a scale marked every  $5^{\circ}$  to  $45^{\circ}$  and a locking thumb screw. All dilators are 6.5" (16.5cm) long, not including the stem. The dilators have a scale on the stem that ranges from 1cm to 7cm which is used for depth.

The holder board included is made from HDPE Blue Polyethylene Colorboard and has a 3" titanium rail. A rail block allows the dilator holder to slide forward and backward when positioning as well as being removable from the rail itself.

Item 946-610 includes only the Holder and board.

#### **Specifications**

#### Item 978-610

**Vertical Post Scale:** From 4.5 cm to 16 cm with black markings every 5 mm and whole numbers every centimeter starting at 3.0 cm

Angle Scale: Marked every 5° to 45°

Clamp: Dual clamps with thumb screws allow for vertical and

anterior-posterior angle adjustment of the dilator

Post Assembly Material: Ertalyte

Board Size: 5.5" W x 20. 5" L x 0.25" Thick (13.8 x 52.1 x 0.6

cm

Handle Cutout: 4" W x 1" L (10.1 x 2.5 cm)

Board Material: HDPE Blue Polyethylene Colorboard

Sterilization: Autoclave or gas

**CT/MRI Conditional** 

Items 946-220 to 946-235

Material: Nylon

Overall Length: 10" (25.4 cm)

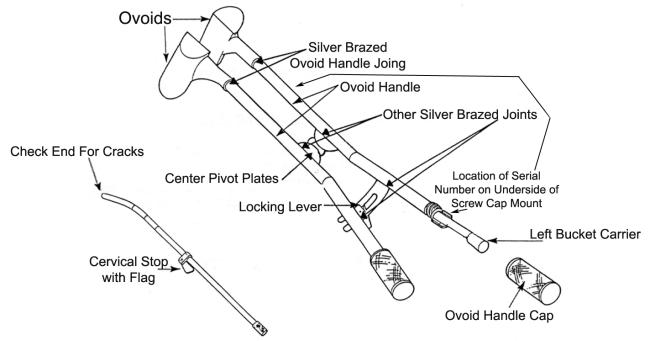
Dilator Length: 6.5" (16.5 cm), not including stem

CT/MRI Safe

Item #	Nylon Dilator
978-610	Adjustable Holder with Board for Dilators with Stem Scale
946-220	20mm Dia. Nylon Dilator with Stem Scale
946-225	25mm Dia. Nylon Dilator with Stem Scale
946-230	30mm Dia. Nylon Dilator with Stem Scale
946-235	35mm Dia. Nylon Dilator with Stem Scale

# Repair and Testing Services for ALL Aferloading Applicators, Call for Details.

#### FLETCHER-SUIT-DELCLOS (FSD) APPLICATOR INSPECTIONS, TESTS AND REPAIRS



Complete units, including the bucket carriers, must be sent to Radiation Products Design for repair. When sending in an applicator for repair the following information is needed: contact name, phone number, address and what repairs are needed.

Radiation Products Design does fiber optic inspection of tungsten shielding inside of the ovoid. We can detect if the tungsten shields are mounted at the top and the bottom of the ovoid.

The following tests can be conducted at Radiation Products Design or within your organization:

Separate the Fletcher-Suit-Delclos (FSD) Applicator into two halves and conduct **Tests A, B, C and D** on each half as follows:

#### **Mechanical Test A**

Gently manipulate each ovoid with one hand while holding the ovoid handle with the other. Each ovoid should be solidly attached to the handle. If the ovoid is loose, Test A fails and unit may be repaired. No other tests need to be done. If test A passes, continue to Test B.

#### Visual Test B

Visually inspect each half of the FSD for hairline cracks at the top and bottom of the ovoid and the ovoid handle joint. Inspect silverbrazed joints where center pivots and the locking brackets attach to the ovoid handles. If cracks are seen, Test B fails and unit may be repaired. No other tests need to be done. If Test B passes, continue to Test C.

#### **Pressure Test C**

Conduct the following test on each half of the FSD:

**Test 1:** Remove the ovoid handle cap from the end of the ovoid handle

Test 2: Remove the bucket carrier

**Test 3:** Stand the ovoid in a cup of water to a depth above the ovoid handle joint

**Test 4:** Apply slight air pressure on the open end of the FSD handle (using for example, a 20 cc syringe connected to surgical tubing connected to the FSD handle), and look for air bubbles escaping from the ovoid or ovoid handle joint. If bubbles are seen, Test C fails and unit may be repaired. If Test C passes, the ovoid is solidly attached to the ovoid handle and no immediate action is necessary.

#### Fiber Optics or Radiograph Test D

Use fiber optic inspection for tungsten placement or radiograph using film.

If Tests A, B, C or D fails stop using the FSD for patient therapy.

#### DELCLOS UTERINE/VAGINAL AFTERLOADING APPLICATOR TEST AND INSPECTION

# Dome Tandem

#### **Mechanical Test for Dome Tandem Assembly**

With one hand grip the dome and with the other hand grip the tandem then try pulling the two apart. If the two pull apart stop using the unit for patient therapy.

#### **CAUTION FOR FLETCHER-SUIT APPLICATORS**

"The U.S. Food and Drug Administration (FDA) has received reports of eight incidents in which the closed end of the intrauterine colpostats of a Fletcher Suit applicator separated from the applicator and remained in the uterus after the applicator had been removed, necessitating an additional removal procedure. Clearly this can cause undesirable complications for patients and holds the potential for the loss radioactive sources within the patient's uterus. The reasons for these separations is unknown. However, cleaning the applicator with hydrogen peroxide or glutaraldehyde (Cidex) prior to autoclaving or cold sterilization can result in corrosion of the applicator's welds.

FDA is using this notice to alert users of Fletcher Suit applicators of this potential problem. FDA believes that all Fletcher Suit applicators should be inspected to determine whether or not

the closed end of the colpostats or the colpostats themselves are adequately secured, and that any applicators that are questionable should not be used. Until recently, manufacturers guidance on cleaning and sterilization may not have been clear. The applicators should be cleaned using **only** a mild detergent and water, and then thoroughly rinsed with water before sterilization.

Although, to date, FDA has only received reports of the problems with Fletcher Suit applicators, it is also recommending that all applicators of similar design be checked, and that the same cleaning instructions be followed."

The above article appears in the American Association of Physicists in Medicine. Volume 14 No. 3, May/June 1988, Pages 7 and 8.

# RENTALS AND REPLACEMENT PARTS FOR 3M #6586 OR MPI FSD AFTERLOADING APPLICATOR



The 3M #6586 or MPI FSD Applicator is no longer available for purchase. Item 970-542, 970-550 and 970-553 on the following pages are suggested replacements.

Complete units including the bucket carriers must be sent to Radiation Products Design for repair or fitting of Ovoid Caps When sending in an applicator for repair the following information is needed: contact name, phone number, address and what repairs are needed.

Item #	Description
970-645-RENTAL	Rental for 3M #6586 FSD Applicator

#### Replacement parts for the 3M #6586 or MPI Fletcher-Suit Delclos Shielded Afterloading Applicators

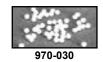
Item #	Description
970-000	12 Plastic Tandems and Pushers
970-010	12 Plastic Tandems
970-020	12 Plastic Pushers
970-200	Straight Standard Tandem w/Cap
970-201	#1 - 15° Standard S.S. Tandem w/Cap
970-202	#2 - 30° Standard S.S. Tandem w/Cap
970-203	#3 - 45° Standard S.S. Tandem w/Cap
970-204	#4 - 60° Standard S.S. Tandem w/Cap
970-212	S.S. Cap for Tandem
970-216	S.S. Cervical Stop
970-217	S.S. Flagged Cervical Stop
970-218	S.S. Screw Cervical Stop #4-40 x 5/16"
970-220	S.S. 3/32" Allen Wrench
970-229	Optional - S.S. Tandem Support Bracket w/1/16" Wrench

Item #	Description
970-252	Sterilization Tray with Autoclave Nameplate
970-645-12	S.S. Cap for Ovoid Handle
970-360-32	Locking Knob, Titanium
970-645-16	S.S. Locking Lever 3M #6-32
970-645-19	2.0 cm Right "D" Shape Nylon Ovoid Cap
970-645-20	2.0 cm Left "D" Shape Nylon Ovoid Cap
970-645-21	2.0 cm Right Nylon Ovoid Cap w/Tungsten
970-645-22	2.0 cm Left Nylon Ovoid Cap w/Tungsten
970-645-26	2.5 cm Right Nylon Ovoid Cap w/Tungsten
970-645-27	2.5 cm Left Nylon Ovoid Cap w/Tungsten
970-645-31	3.0 cm Right Nylon Ovoid Cap w/Tungsten
970-645-32	3.0 cm Left Nylon Ovoid Cap w/Tungsten
970-645-40	Right S.S. Bucket Carrier
970-645-42	Left S.S. Bucket Carrier

L - 13

#### **PLASTIC AFTERLOADERS**





Item	Description
970-000	12 Plastic Tandems and Pushers
970-010	12 Plastic Tandems <b>Only</b>
970-020	12 plastic Pushers <b>Only</b>
970-030	50 Nylon Spacer Balls - 3/32" Dia. (2.4 mm)

#### **TUNGSTEN DUMMY SOURCES**



Item	Description
985-001	Tungsten Dummy Source
985-010	Tungsten Mini Dummy Source 1.6 mm Dia. x 19 mm L
985-020	3M FSD Al Cased Tungsten Dummy Source with Hole Outside: 3.0 mm Dia. x 20 mm L Tungsten: 1.5 mm Dia. x 13.8 mm L
985-030	Tungsten Dummy Source 3.0 mm Dia. x 20 mm L
985-031	3M Tungsten Dummy Source 3.0 mm Dia. x 16 mm L

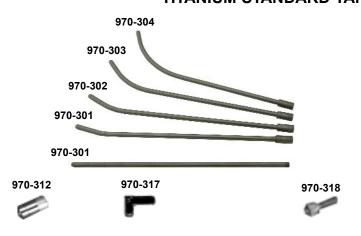
#### STANDARD AND MINI TANDEMS



Item #	Description
970-200	Straight Standard S.S. Tandem w/Cap
970-201	#1 - 15° Standard S.S. Tandem w/Cap
970-202	#2 - 30° Standard S.S. Tandem w/Cap
970-203	#3 - 45° Standard S.S. Tandem w/Cap
970-204	#4 - 60° Standard S.S. Tandem w/Cap
970-205	#3 - 45° Double Curved S.S. Tandem for Bracket w/Cap
970-206	#4 - 60° Double Curved S.S. Tandem for Bracket w/Cap
970-212	S.S. Cap for Tandem (3M Style)
970-216	S.S. Cervical Stop
970-217	S.S. Flagged Cervical Stop
970-218	S.S. Screw Cervical Stop #4-40 x 5/16"
970-220	S.S. 3/32" Allen Wrench
970-670-59	S.S. 3/32" Long Handle Allen Wrench

Item #	Description
970-231	Mini #1 - 15° S.S. Tandem w/Cap
970-232	Mini #2 - 30° S.S.Tandem w/Cap
970-233	Mini #3 - 45° S.S. Tandem w/Cap
970-242	Mini S.S. Cervical Stop
970-243	Mini S.S. Flagged Cervical Stop
970-246	FSD S.S. Bucket Liner for Mini Sources

#### TITANIUM STANDARD TANDEMS AND ACCESSORIES



Item #	Description	Material
970-300	Straight Standard Tandem w/Cap	Titanium
970-301	#1 - 15° Standard Tandem w/Cap	Titanium
970-302	#2 - 30° Standard Tandem w/Cap	Titanium
970-303	#3 - 45° Standard Tandem w/Cap	Titanium
970-304	#4 - 60° Standard Tandem w/Cap	Titanium
970-312	Cap for Tandem	Titanium
970-317	Flagged Cervical Stop	Titanium
970-318	Screw Cervical Stop #4-40 x 5/16"	Titanium
970-670-08	15 cm Threaded Tandem for Dome	Titanium
970-220	3/32" Allen Wrench	Stainless Steel
970-670-59	3/32" Long Handle Allen Wrench	Stainless Steel

#### STERILIZATION TRAYS



These instrument trays are designed to encase instruments during processing and are safe for all standard sterilization methods: Autoclave/dry heat up to 360°F, ETO, and Cold Solutions.

These trays will last over 1000 cycles when properly handled and processed.

Use of these Instrument Trays must be in accordance with the operating instruction supplied with your particular sterilization equipment and in keeping with your particular sterilization equipment and in keeping with your hospital policy on sterilization validation. Several organizations (e.g., AAMI, AORN and ISO) publish guidance information on sterilization usage should you need additional information.

Periodic cleaning of the trays after sterilization process is recommended to prolong usable life.

Do not use if damaged

RPD sterilization trays can be customized to adapt to a wide variety of individualized configurations.

The uniquely engineered "grid system" allows for easy insertion of the special silicone instrument bars manufactured from medical grade silicone.

Sterilization trays are engineered with a rubber bristle surface to facilitate better steam penetration underneath the mats.

Sterilization trays are made to withstand common sterilization protocols including steam, gas, cold sterilizing solutions, and temperatures up to 360o Fahrenheit.

Sterilization trays are engineered and manufactured to the extend sterilization life cycles.

Advanced medical grade polymers are used to manufacture RPD trays.

Sterilization trays are designed to encase instruments for sterilization in steam and ethylene oxide.

An appropriate sterile barrier will be required to maintain sterility.

#### **Specifications**

**Overall Size:** 15.5" W x 10.3" D x 1.85" H (39.5 x 26.5 x 4.7 cm)

Item	Description
970-250	Large Sterilization Tray with RPD Nameplate
970-252	Large Sterilization Tray with Autoclave Nameplate
970-254	Large Sterilization Tray with Gas Nameplate

#### **WEEKS CT MINI-OVOID APPLICATOR SET**





The Weeks CT Applicator Afterloading Set (with CT Mini-Ovoid, Stainless Steel Pivot, and Shielded Gold Buckets), was designed for the patient with narrow vault anatomy that will not accommodate the round ovoid of the standard Fletcher Suit Applicator. The ovoid is flattened medially. The handle is 19 cm long to the ovoid center. The ovoids, made of high temperature plastic, are 13 mm in width and 30 mm high and have a 15° angle. The handle is made of stainless steel for durability with light weight titanium knob and caps. The applicator's shielded gold bucket carriers accommodate Cesium 137 (Cs-137) sources up to 3.2 mm diameter x 20 mm long for LDR Brachytherapy treatments. Two CT Dummy Bucket Carriers with markers indicating radiation source location are also provided. Included with the set are 2 cm, 2.5 cm, and 3 cm ovoid caps made of high temperature plastic. The set also includes four 8 mm diameter coated aluminum tandems with curvatures of 15°, 30°, 45°, and 60° with caps made of high temperature plastic. The tandems are marked every 2 cm over a 12 cm range from the tip. Also included are two flagged cervical stops made of high temperature plastic.

#### **Specifications**

High temperature plastic density: 1.28 g/cm³

Gold density: 19.3 g/cm<sup>3</sup>

**Sterilization**Autoclavable

Clean using detergent

#### Item 970-360 Weeks CT Mini-Ovoid Set Includes

- (1) Applicator with Stainless Steel Pivot
- (2) Shielded Gold Bucket Carriers
- (2) CT Bucket Carriers for Left or Right Side
- (2) 2.0 cm Diameter High Temperature Plastic (HTP) Ovoid Caps
- (2) 2.5 cm Diameter High Temperature Plastic (HTP) Ovoid Caps
- (2) 3.0 cm Diameter High Temperature Plastic (HTP) Ovoid Caps
- (4) Coated Aluminum Tandems and Caps (15°, 30°, 45°, and 60°)
- (2) Flagged Cervical Stops, High Temperature Plastic
- (1) 3/32" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources
- (1) Sterilization Tray

Item	Description
970-360	Weeks CT Mini-Ovoid Pivot S.S. Applicator Set w/Tray
970-360-001	Weeks CT Mini-Ovoid Pivot S.S. Applicator (Set Only)
970-360-002	Weeks CT Mini-Ovoid Pivot S.S. Applicator ONLY

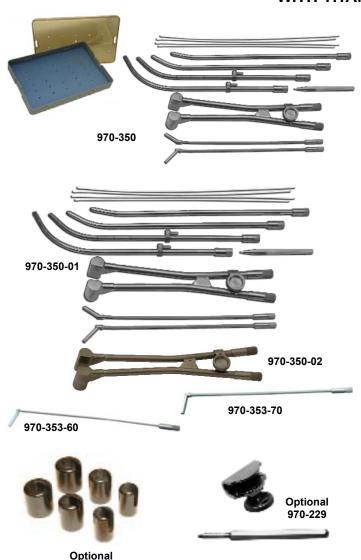
#### Replacement parts for Weeks CT Applicator Item 970-360

Item	Description
970-000	12 Plastic Tandems and Pushers
970-010	12 Plastic Tandems
970-020	12 Plastic Pushers
970-101	DVD on Fletcher Colpostat Technique
970-220	3/32" Allen Wrench
970-360-10	Bucket Carrier, Right, Shielded Gold
970-360-11	Bucket Carrier, Left, Shielded Gold
970-360-25	CT Bucket Carrier (Right or Left Side)
970-360-30	Cap, Titanium, for Ovoid Handle
970-360-32	Knob, Locking, Titanium
970-360-50	2.0cm Right Ovoid HTP Cap, No Tungsten
970-360-51	2.0cm Left Ovoid HTP Cap, No Tungsten
970-360-52	2.5cm Right Ovoid HTP Cap, No Tungsten

Item	Description
970-360-53	2.5cm Left Ovoid HTP Cap, No Tungsten
970-360-54	3.0cm Right Ovoid HTP Cap, No Tungsten
970-360-55	3.0cm Left Ovoid HTP Cap, No Tungsten
970-371	#1 - 15°, 8mm Dia. Tandem, Coated Alum. w/ Cap
970-372	#2 - 30°, 8mm Dia. Tandem, Coated Alum. w/ Cap
970-373	#3 - 45°, 8mm Dia. Tandem, Coated Alum. w/ Cap
970-374	#4 - 60°, 8mm Dia. Tandem, Coated Alum. w/ Cap
970-375	Flagged Cervical Stop, High Temperature Plastic
970-3752	Screw Aluminum Cervical Stop #4-40 x 5/16"
970-377	Cap for Tandem, High Temperature Plastic
970-379	Dummy Source for CT, Teflon
970-252	Sterilization Tray with Autoclave Nameplate

L - 16

# TITANIUM MINI-OVOID LONG HANDLE AFTERLOADING APPLICATOR SET WITH TITANIUM PIVOT



The Titanium Mini-Ovoid Long Handle Afterloading Applicator Set with Titanium Pivot was designed for the patient with a narrow or tortuous vault that will not accommodate the round ovoid of the standard Fletcher-Suit Applicator. The ovoid is flattened medially to accommodate a very small anatomy. The flattened area results in an increased dose to the cervix. The handle is 19 cm long to the ovoid center. The ovoids are 12 mm in width, 29 mm high, have a 15° angle and **do not have shielding**. The applicator bucket carriers accommodate Cesium 137 sources up to 3.2 mm diameter x 20 mm long. Option dummy sources are available (Item 985-000 to Item 985-031). Tungsten shielded high temperature plastic ovoid caps are optional. The titanium tandems are marked every 2 cm over a 12 cm range.

#### Sterilization:

Clean using detergent Autoclavable

# Item 970-350 Titanium Mini-Ovoid Long Handle Afterloading Applicator Set with Titanium Pivot includes:

- (1) Titanium Applicator with titanium pivot and two bucket carriers
- (4) Titanium tandems and caps -15°, 30°, 45° and 60°
- (2) Titanium flagged cervical stops
- (1) 3/32" Allen wrench
- (4) Plastic tandems and pushers
- (1) Sterilization tray

**Item 970-350-01** is the same as Item 970-350 without the sterilization tray.

**Item 970-350-02** is the applicator with titanium pivot and two bucket carriers.

Item #	Description
970-350	Mini-Ovoid Applicator Set with Sterilization Tray
970-350-01	Mini-Ovoid Applicator Set without Sterilization Tray
970-350-02	Mini-Ovoid Applicator with (2) Bucket Carriers

#### Replacement parts for the Titanium Mini-Ovoid with Pivot Applicator Item 970-350, 970-350-01 and 970-350-02

Item #	Description
970-000	12 Plastic Tandems and Pushers
970-010	12 Plastic Tandems
970-020	12 Plastic Pushers
970-300	Optional Straight Standard Titanium Tandem w/Cap
970-301	#1 - 15° Standard Titanium Tandem w/Cap
970-302	#2 - 30° Standard Titanium Tandem w/Cap
970-303	#3 - 45° Standard Titanium Tandem w/Cap
970-304	#4 - 60° Standard Titanium Tandem w/Cap
970-312	Cap for Tandem - Titanium
970-317	Flagged Cervical Stop - Titanium
970-318	Screw for Flagged Cervical Stop #4-40 x 5/16" - Titanium
970-220	3/32" Allen Wrench
970-670-59	Optional - 3/32" Large Handle Allen Wrench

970-650-40 to 970-650-45

Item #	Description
970-353-12	Cap for Ovoid Handle - Titanium
970-350-18	Optional Tandem Support Hook Assembly - Titanium
970-353-70	Right/Left Bucket Carrier - Stainless Steel
970-353-60	Optional Right/Left CT Bucket Carrier - Titanium/Delrin
970-350-50	Knob #6-32 - Titanium
970-252	Sterilization Tray with Autoclave Nameplate
970-650-40	Optional 2.0 cm Right Ovoid HTP Cap w/Tungsten
970-650-41	Optional 2.0 cm Left Ovoid HTP Cap w/Tungsten
970-650-42	Optional 2.5 cm Right Ovoid HTP Cap w/Tungsten
970-650-43	Optional 2.5 cm Left Ovoid HTP Cap w/Tungsten
970-650-44	Optional 3.0 cm Right Ovoid HTP Cap w/Tungsten
970-650-45	Optional 3.0 cm Left Ovoid HTP Cap w/Tungsten
970-229	Optional Tandem Support Bracket S.S. w/1 1/16" Wrench

#### FLETCHER-SUIT DELCLOS SHIELDED ROUND OVOID STAINLESS STEEL APPLICATOR



- Lightweight
- Easy Source Loading Procedure
- Unbreakable Joints

FSD Shielded Round Ovoid Long Handle Applicator with Stainless Steel Pivot employs the same features as the Rectangular Handle Fletcher-Suit Afterloading applicator but is less bulky, lighter, and has an easier source loading procedure. The lead (density 11.35 g/cm³) shields were replaced with high density 19.3 g/cm³ tungsten. The handle is 19 cm long to the ovoid center. The ovoid's are 20 mm in diameter, 30 mm high, have a 15° angle. The ovoid's have immovable tungsten shielding for bladder and rectal protection. The handle is stainless steel for durability with a lightweight titanium knob and lightweight titanium ovoid handle caps. The handle is completely Heli-Arc welded at all joints

Item	Description
970-541	F.S.D. Shielded Round Ovoid, Stainless Steel Pivot Applicator Set with Sterilization Tray
970-541-1	F.S.D. Shielded Round Ovoid, Stainless Steel Pivot Applicator Set, No Sterilization Tray
970-541-2	F.S.D.Shielded Round Ovoid, Stainless Steel Pivot Applicator with Caps ONLY

Item	Optional Items
970-101	DVD on Fletcher Colpostat Technique
970-200	Straight Standard S.S. Tandem with Cap
970-229	S.S. Tandem Support Bracket with 1/16" Allen Wrench
985-030	Tungsten Dummy Source, 3.0 mm Dia. x 20 mm L

including pivot and locking for unbreakable joints. The applicator bucket carriers accommodate Cesium 137 sources up to 3.2 mm diameter x 20 mm long. A hole in the bucket carrier allows the user to push the source out, if the source gets stuck inside the bucket carrier. Ovoid caps increase the diameter of the ovoid. Four ovoid caps, (2) 2.5 cm and (2) 3.0 cm diameter are furnished with the applicator. The stainless steel tandems are marked every 2 cm over a 12 cm range. Optional items available include Stainless Steel Tandem Support Bracket with 1/16" Allen Wrench (Item 970-229) Tungsten Dummy Sources (Item 985-030) and Cesium 137 Tube Sources (Items 067-6510 to 067-6540).

#### Item 970-541 Includes

- (1) Applicator with Stainless Steel Pivot and Two Bucket Carriers
- (2) 2.5 cm Diameter Nylon Ovoid Cap
- (2) 3.0 cm Diameter Nylon Ovoid Cap
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (1) Cervical Stop
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources
- (1) Sterilization Tray

#### Item 970-541-1 Includes

- (1) Applicator with Stainless Steel Pivot and Two Bucket Carriers
- (2) 2.5 cm Diameter Nylon Ovoid Cap
- (2) 3.0 cm Diameter Nylon Ovoid Cap
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (1) Cervical Stop
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources

#### Item 970-541-2 Includes

- (1) Applicator with Stainless Steel Pivot and Two Bucket Carriers
- (2) 2.5 cm Diameter Nylon Ovoid Cap
- (2) 3.0 cm Diameter Nylon Ovoid Cap

Item	Replacement Parts
970-000	Afterloading Plastic TANDEMS & PUSHERS (12/pkg)
970-010	Afterloading Plastic TANDEMS ONLY
970-020	Afterloading Plastic PUSHERS ONLY
970-201	#1 Tandem-15° Standard S.S with Cap (970-212)
970-202	#2 Tandem-30° Standard S.S with Cap (970-212)
970-203	#3 Tandem-45° Standard S.S. with Cap (970-212)
970-204	#4 Tandem-60° Standard S.S. with Cap (970-212)
970-212	Cap for Tandems (3M), Stainless Steel
970-216	Cervical Stop, Stainless Steel
970-217	Flagged Cervical Stop, Stainless Steel
970-218	Screw, S.S., f/Cervical Stop #4-40x5/16" Socket Head
970-220	3/32" Allen Wrench, Stainless Steel
970-360-30	Cap, Titanium, for Ovoid Handle
970-360-32	Locking Knob, Titanium
970-541-40	Bucket Carrier Right, Stainless Steel
970-541-42	Bucket Carrier Left, Stainless Steel
970-541-50	2.5cm Left/Right Nylon Ovoid Cap
970-541-52	3.0cm Left/Right Nylon Ovoid Cap
970-252	Sterilization Tray with Autoclave Nameplate

#### FLETCHER-SUIT DELCLOS SHIELDED ROUND OVOID LONG HANDLE APPLICATOR



- Lightweight
- Easy Source Loading Procedure
- Unbreakable Joints

FSD Shielded Round Ovoid Long Handle Applicator with Bracket Pivot employs the same features as the Rectangular Handle Fletcher-Suit Afterloading Applicator but is less bulky, lighter, and has an easier source loading procedure. The lead (density 11.35 g/cm³) shields were replaced with high density 19.3 g/cm³ tungsten. The handle is 19 cm long to the ovoid center. The ovoids are 20 mm in diameter, 30 mm high, have a 15° angle. The ovoid's have immovable tungsten shielding for bladder and rectal protection. The applicator uses a two piece adjustable handle pivot bracket with a tandem supprt hook. The applicator is completely Heli-Arc welded at all joints for unbreakable joints. The applicator bucket carriers accommodate Cesium 137 sources up

Item	Description
970-543	F.S.D. Shielded Round Ovoid, Bracket Pivot Applicator Set with Sterilization Tray
970-543-1	F.S.D. Shielded Round Ovoid, Bracket Pivot Applicator Set, No Sterilization Tray
970-543-2	F.S.D. Shielded Round Ovoid, Bracket Pivot Applicator with Caps and 1/16" Allen Wrench ONLY

Item	Optional Items
970-101	DVD on Fletcher Colpostat Technique
970-200	Straight Standard S.S. Tandem with Cap
985-030	Tungsten Dummy Source, 3.0 mm Dia. x 20 mm L

to 3.2 mm diameter x 20 mm long. A hole in the bucket carrier allows the user to push the source out, if the source gets stuck inside the bucket carrier. Ovoid caps increase the diameter of the ovoid. Four ovoid caps, (2) 2.5 cm and (2) 3.0 cm diameter are furnished with the applicator. The stainless steel tandems are marked every 2 cm over a 12 cm range. Optional items available include Tungsten Dummy Sources (Item 985-030) and Cesium 137 Tube Sources (Items 067-6510 to 067-6540).

#### Item 970-543 Includes

- (1) Applicator with Bracket Pivot and Two Bucket Carriers
- (2) 2.5 cm Diameter Nylon Ovoid Cap
- (2) 3.0 cm Diameter Nylon Ovoid Cap
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (1) Cervical Stop
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (1) 1/16" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources
- (1) Sterilization Tray

#### Item 970-543-1 Includes

- (1) Applicator with Bracket Pivot and Two Bucket Carriers
- (2) 2.5 cm Diameter Nylon Ovoid Cap
- (2) 3.0 cm Diameter Nylon Ovoid Cap
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (1) Cervical Stop
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (1) 1/16" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources

#### Item 970-543-2 Includes

- (1) Applicator with Bracket Pivot and Two Bucket Carriers
- (2) 2.5 cm Diameter Nylon Ovoid Cap
- (2) 3.0 cm Diameter Nylon Ovoid Cap
- (1) 1/16" Allen Wrench

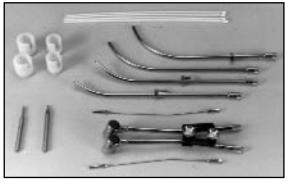
Item	Replacement Parts
970-000	Afterloading Plastic TANDEMS & PUSHERS (12/pkg)
970-010	Afterloading Plastic TANDEMS ONLY
970-020	Afterloading Plastic PUSHERS ONLY
970-201	#1 Tandem-15° Standard S.S with Cap (970-212)
970-202	#2 Tandem-30° Standard S.S with Cap (970-212)
970-203	#3 Tandem-45° Standard S.S. with Cap (970-212)
970-204	#4 Tandem-60° Standard S.S. with Cap (970-212)
970-212	Cap for Tandems (3M), Stainless Steel
970-216	Cervical Stop, Stainless Steel
970-217	Flagged Cervical Stop, Stainless Steel
970-218	Screw, S.S., f/Cervical Stop #4-40x5/16" Socket Head
970-220	3/32" Allen Wrench, Stainless Steel
970-643-22	Handle Bracket Set, Complete with Knobs and Wrench
970-360-30	Titanium Cap for Ovoid Handle
970-541-40	Bucket Carrier Right, Stainless Steel
970-541-42	Bucket Carrier Left, Stainless Steel
970-541-50	2.5cm Left/Right Nylon Ovoid Cap
970-541-52	3.0cm Left/Right Nylon Ovoid Cap
970-252	Sterilization Tray with Autoclave Nameplate

# FLETCHER-SUIT DELCLOS SHIELDED ROUND LONG HANDLE AFTERLOADING APPLICATOR SET With Tandem Support

#### Replacement for Rectangular Handle Fletcher-Suit Applicator



970-643



970-643-01



**Optional 970-206** 

The FSD Shielded Round Long Handle S.S. Afterloading Applicator employs the same features as the Rectangular Handle Fletcher-Suit S.S. Afterloading Applicator but is less bulky, lighter, and has an easier loading procedure of the source. The S.S. applicator handle measures 19 cm long to the ovoid. The stainless steel ovoids are 20 mm diameter x 30 mm high and have an angle of 15°. They have immovable tungsten shielding for bladder and rectal protection. The applicator uses a two piece S.S. adjustable handle pivot bracket with a tandem support hook. The applicator S.S. bucket carriers accommodate either Cesium 137 or Radium 226 sources up to 3.4 mm diameter x 23 mm long. Dummy sources are available (Item 985-000 to 985-031). The S.S. tandems are marked every 2 cm over an 8 cm range.

# Item 970-643 FSD Shielded Round Long Handle Afterloading Applicator Set with Tandem Support includes:

- (1) S.S. Applicator with adjustable handle bracket with a tandem support hook and two S.S. bucket carriers  ${\sf S}$
- (2) Each of the 2.5 and 3.0 cm diameter nylon ovoid caps
- (4) Stainless steel tandems and caps 15°, 30°, 45° and 60°
- (1) S.S. Cervical stop
- (2) S.S. Flagged cervical stops
- (2) S.S. Allen wrenches
- (4) Plastic tandems and pushers
- (1) Sterilization tray

**Item 970-643-01** is the same as Item 970-643 without the sterilization tray.

**Item 970-643-02** is the applicator with handle bracket and tandem support hook, two bucket carriers, and a wrench.

Item #	Description
970-643	FSD Long Handle S.S. Applicator Set with Sterilization Tray
970-643-01	FSD Long Handle S.S. Applicator Set w/out Sterilization Tray
970-643-02	FSD Long Handle S.S. Applicator with Bucket Carriers

# Replacement parts for the FSD Shielded Round Long Handle Applicator with Tandem Support Item 970-643, 970-643-01 and 970-643-02

Item #	Description
970-000	12 Plastic Tandems and Pushers
970-010	12 Plastic Tandems
970-020	12 Plastic Pushers
970-200	Straight Standard S.S. Tandem w/Cap
970-201	#1 - 15° Standard S.S. Tandem w/Cap
970-202	#2 - 30° Standard S.S. Tandem w/Cap
970-203	#3 - 45° Standard S.S. Tandem w/Cap
970-204	#4 - 60° Standard S.S. Tandem w/Cap
970-205	#3 - 45° Double Curved S.S. Tandem for Bracket w/Cap
970-206	#4 - 60° Double Curved S.S. Tandem for Bracket w/Cap
970-212	S.S. Cap for Tandem
970-216	S.S. Cervical Stop
970-217	S.S. Flagged Cervical Stop
970-218	S.S. Screw Cervical Stop #4-40 x 5/16"
970-220	3/32" S.S. Allen Wrench
970-670-59	Optional - 3/32" Large Handle S.S. Allen Wrench

Item #	Description
970-229-6	1/16" S.S. Allen Wrench
970-641-12	S.S. Cap for Ovoid Handle
970-641-2	2.5 cm Nylon Ovoid Cap
970-641-3	3.0 cm Nylon Ovoid Cap
970-643-18	S.S. Tandem Support Hook
970-643-20	S.S. Upper Left Handle Bracket
970-643-21	S.S. Lower Right Handle Bracket
970-643-22	S.S. Handle Bracket Set
970-643-23	Nylon Pivot for Bracket
970-643-50	S.S. Knob w/Holes #10-32
970-643-51	S.S. "U" Knob #10-32
970-252	Sterilization Tray with Autoclave Nameplate

#### DELCLOS MINI-OVOID LONG HANDLE STAINLESS STEEL PIVOT APPLICATOR SET



- Accommodates a Very Small Anatomy
- Unbreakable Joints

The Delclos Mini-Ovoid Long Handle Afterloading Applicator Set with Stainless Steel Pivot was designed for the patient with a narrow or tortuous vault that will not accommodate the round ovoid of the standard Fletcher-Suit Applicator. The ovoid is flattened medially to accommodate a very small anatomy. The flattened area results in an increased dose to the cervix. The handle is 19 cm long to the ovoid center. The ovoid's are 12.8 mm in width, 30 mm high, have a 15° angle and **do not have shielding**. The handle is stainless steel for durability with a lightweight titanium locking knob and lightweight titanium ovoid handle caps.

Item	Optional Items
970-101	DVD on Fletcher Colpostat Technique
970-200	Straight Standard S.S. Tandem with Cap
970-229	S.S. Tandem Support Bracket with 1/16" Allen Wrench
970-650-40	2.0cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-41	2.0cm Left Mini Ovoid HTP Cap w/Tungsten Shield
970-650-42	2.5cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-43	2.5cm Left Mini Ovoid HTP Cap w/Tungsten Shield
970-650-44	3.0cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-45	3.0cm Left Mini Ovoid HTP Cap w/Tungsten Shield
985-030	Tungsten Dummy Source, 3.0 mm Dia. x 20 mm L

The handle is completely Heli-Arc welded at all joints including pivot and locking for unbreakable joints. The applicator bucket carriers accommodate Cesium 137 sources up to 3.2 mm diameter x 20 mm long. A hole in the bucket carrier allows the user to push the source out, if the source gets stuck inside the bucket carrier. The stainless steel tandems are marked every 2 cm over a 12 cm range. Optional items available include Stainless Steel Tandem Support Bracket with 1/16" Allen Wrench (Item 970-229), 2.0 cm, 2.5 cm and 3.0 cm diameter Tungsten Shielded High Temperature Plastic Ovoid Caps (Items 970-650-40 to 970-650-45), Cesium 137 Tube Sources (Items 067-6510 to 067-6540) and Tungsten Dummy Sources (Item 985-030).

#### Item 970-550 Includes

- (1) Applicator with Stainless Steel Pivot and Two Bucket Carriers
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (1) Cervical Stops
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources
- (1) Sterilization Tray

#### Item 970-550-1 Includes

- (1) Applicator with Stainless Steel Pivot and Two Bucket Carriers
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources

#### Item 970-550-2 Includes

(1) Applicator with Stainless Steel Pivot and Two Bucket Carriers

Item	Description
970-550	Delclos Mini-Ovoid Long Handle Stainless Steel Pivot Applicator Set with Sterilization Tray
970-550-1	Delclos Mini-Ovoid Long Handle Stainless Steel Pivot Applicator Set, No Sterilization Tray
970-550-2	Delclos Mini-Ovoid Long Handle Stainless Steel Pivot Applicator

Item	Replacement Parts
970-000	Afterloading Plastic TANDEMS & PUSHERS (12/pkg)
970-010	Afterloading Plastic TANDEMS ONLY
970-020	Afterloading Plastic PUSHERS ONLY
970-201	#1 Tandem-15° Standard S.S with Cap (970-212)
970-202	#2 Tandem-30° Standard S.S with Cap (970-212)
970-203	#3 Tandem-45° Standard S.S. with Cap (970-212)
970-204	#4 Tandem-60° Standard S.S. with Cap (970-212)
970-212	Cap for Tandems (3M), Stainless Steel
970-216	Cervical Stop, Stainless Steel
970-217	Flagged Cervical Stop, Stainless Steel
970-218	Screw, S.S., f/Cervical Stop #4-40x5/16" Socket Head
970-220	3/32" Allen Wrench, Stainless Steel
970-360-30	Titanium Cap for Ovoid Handle
970-360-32	Locking Knob, Titanium
970-541-40	Bucket Carrier Right, Stainless Steel
970-541-42	Bucket Carrier Left, Stainless Steel
970-252	Sterilization Tray with Autoclave Nameplate

L - 21

#### DELCLOS MINI-OVOID LONG HANDLE BRACKET PIVOT APPLICATOR SET



- Accommodates a Very Small Anatomy
- · Unbreakable Joints

The Delclos Mini-Ovoid Long Handle Afterloading Applicator Set with Bracket Pivot was designed for the patient with a narrow or tortuous vault that will not accommodate the round ovoid of the standard Fletcher-Suit Applicator. The ovoid is flattened medially to accommodate a very small anatomy. The flattened area results in an increased dose to the cervix. The handle is 19 cm long to the ovoid center. The ovoids are 12.8 mm in width, 30 mm high, have a 15° angle and **do not have shielding**. The applicator uses a two piece adjustable handle pivot bracket with a tandem support hook. The applicator is completely Heli-Arc welded at all joints for unbreakable joints. The applicator bucket carriers accommodate Cesium 137 sources up to 3.2 mm diameter x 20 mm long. A hole in the bucket carrier allows the user to push the source out, if the source gets stuck inside the bucket carrier. The stainless steel

Item	Optional Items
970-101	DVD on Fletcher Colpostat Technique
970-200	Straight Standard S.S. Tandem with Cap
970-650-40	2.0cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-41	2.0cm Left Mini Ovoid HTP Cap w/Tungsten Shield
970-650-42	2.5cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-43	2.5cm Left Mini Ovoid HTP Cap w/Tungsten Shield
970-650-44	3.0cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-45	3.0cm Left Mini Ovoid HTP Cap w/Tungsten Shield
985-030	Tungsten Dummy Source, 3.0 mm Dia. x 20 mm L

tandems are marked every 2 cm over a 12 cm range. Optional items available include Tungsten Dummy Sources (Item 985-030), 2.0 cm, 2.5 cm and 3.0 cm diameter Tungsten Shielded High Temperature Plastic Ovoid Caps (Items 970-650-40 to 970-650-45) and Cesium 137 Tube Sources (Items 067-6510 to 067-6540).

#### Item 970-553 Includes

- (1) Applicator with Bracket Pivot and Two Bucket Carriers
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (1) Cervical Stop
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (1) 1/16" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources
- (1) Sterilization Tray

#### Item 970-553-1 Includes

- (1) Applicator with Bracket Pivot and Two Bucket Carriers
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (1) Cervical Stop
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (1) 1/16" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources

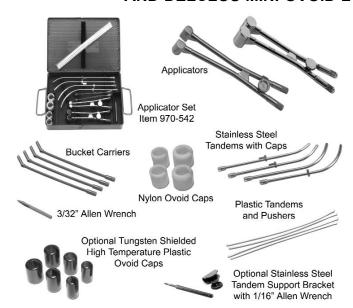
#### Item 970-553-2 Includes

- (1) Applicator with Bracket Pivot and Two Bucket Carriers
- (1) 1/16" Allen Wrench

Item	Description
970-553	Delclos Mini-Ovoid Long Handle Applicator Set with Bracket Pivot, Tandem Support Hook and Sterilization Tray
970-553-1	Delclos Mini-Ovoid Long Handle Applicator Set with Bracket Pivot and Tandem Support Hook, No Sterilization Tray
970-553-2	Delclos Mini-Ovoid Long Handle Applicator with Bracket Pivot and Tandem Support Hook

Item	Replacement Parts
970-000	Afterloading Plastic TANDEMS & PUSHERS (12/pkg)
970-010	Afterloading Plastic TANDEMS ONLY
970-020	Afterloading Plastic PUSHERS ONLY
970-201	#1 Tandem-15° Standard S.S with Cap (970-212)
970-202	#2 Tandem-30° Standard S.S with Cap (970-212)
970-203	#3 Tandem-45° Standard S.S. with Cap (970-212)
970-204	#4 Tandem-60° Standard S.S. with Cap (970-212)
970-212	Cap for Tandems (3M), Stainless Steel
970-216	Cervical Stop, Stainless Steel
970-217	Flagged Cervical Stop, Stainless Steel
970-218	Screw, S.S., f/Cervical Stop #4-40x5/16" Socket Head
970-220	3/32" Allen Wrench, Stainless Steel
970-360-30	Titanium Cap for Ovoid Handle
970-541-40	Bucket Carrier Right, Stainless Steel
970-541-42	Bucket Carrier Left, Stainless Steel
970-643-22	Handle Bracket Set, Complete with Knobs and Wrench
970-252	Sterilization Tray with Autoclave Nameplate

# COMBINATION FSD SHIELDED ROUND OVOID AND DELCLOS MINI-OVOID LONG HANDLE APPLICATOR SET



- Lightweight
- Easy Source Loading Procedure
- Accommodates a Very Small Anatomy
- · Unbreakable Joints

FSD Shielded Round Ovoid Long Handle Applicator with Stainless Steel Pivot employs the same features as the Rectangular Handle Fletcher-Suit Afterloading applicator but is less bulky, lighter, and has an easier source loading procedure. The ovoid's have immovable tungsten shielding for bladder and rectal protection. The applicator bucket carriers accommodate Cesium 137 sources up to 3.2 mm diameter x 20 mm long.

Item	Description
970-542	Combination FSD Shielded Round Ovoid Long Handle Applicator with Stainless Steel Pivot and Delclos Mini-Ovoid Long Handle Applicator with Stainless Steel Pivot Set, Includes Tandems and Sterilization Tray
Item	Optional Items
067-6510	Cs-137 TUBE SOURCE, 10 mg Ra Equivalent-Red
067-6515	Cs-137 TUBE SOURCE, 15 mg Ra Equivalent-Black
067-6520	Cs-137 TUBE SOURCE, 20 mg Ra Equivalent-White
067-6525	Cs-137 TUBE SOURCE, 25 mg Ra Equivalent-Blue
067-6530	Cs-137 TUBE SOURCE, 30 mg Ra Equivalent-Orange
067-6535	Cs-137 TUBE SOURCE, 35 mg Ra Equivalent-Green
067-6540	Cs-137 TUBE SOURCE, 40 mg Ra Equivalent-Gray
970-101	DVD on Fletcher Colpostat Technique
970-200	Straight Standard S.S. Tandem with Cap
970-229	S.S. Tandem Support Bracket with 1/16" Allen Wrench
970-650-40	2.0cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-41	2.0cm Left Mini Ovoid HTP Cap w/Tungsten Shield
970-650-42	2.5cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-43	2.5cm Left Mini Ovoid HTP Cap w/Tungsten Shield
970-650-44	3.0cm Right Mini Ovoid HTP Cap w/Tungsten Shield
970-650-45	3.0cm Left Mini Ovoid HTP Cap w/Tungsten Shield
985-030	Tungsten Dummy Source, 3.0 mm Dia. x 20 mm L

The Delclos Mini-Ovoid Long Handle Afterloading Applicator Set with Stainless Steel Pivot was designed for the patient with a narrow or tortuous vault that will not accommodate the round ovoid of the standard Fletcher-Suit Applicator. The ovoid is flattened medially to accommodate a very small anatomy. The flattened area results in an increased dose to the cervix. The ovoid's are 12.8 mm in width, 30 mm high, have a 15° angle and **do not have shielding.** The applicator bucket carriers accommodate Cesium 137 sources up to 3.2 mm diameter x 20 mm long.

Optional items available include Stainless Steel Tandem Support Bracket with 1/16" Allen Wrench (Item 970-229), 2.0 cm, 2.5 cm and 3.0 cm diameter Tungsten Shielded High Temperature Plastic Ovoid Caps (Items 970-650-40 to 970-650-45), Cesium 137 Tube Sources (Items 067-6510 to 067-6540) and Tungsten Dummy Sources (Item 985-030).

#### Item 970-542 Includes

- (1) FSD Shielded Round Ovoid Long Handle Applicator with Stainless Steel Pivot and Two Bucket Carriers
- (2) 2.5 cm Diameter Nylon Ovoid Cap
- (2) 3.0 cm Diameter Nylon Ovoid Cap
- Delclos Mini-Ovoid Long Handle Applicator with Stainless Steel Pivot and Two Bucket Carriers
- (4) Stainless Steel Tandems and Caps (15°, 30°, 45°, and 60°)
- (1) Cervical Stop
- (2) Flagged Cervical Stops
- (1) 3/32" Allen Wrench
- (4) Plastic Tandems and Pushers for Sources
- (1) Sterilization Tray

(1) Stormzation may	
Item	Replacement Parts
970-000	Afterloading Plastic TANDEMS & PUSHERS (12/pkg)
970-010	Afterloading Plastic TANDEMS ONLY
970-020	Afterloading Plastic PUSHERS ONLY
970-201	#1 Tandem-15° Standard S.S with Cap (970-212)
970-202	#2 Tandem-30° Standard S.S with Cap (970-212)
970-203	#3 Tandem-45° Standard S.S. with Cap (970-212)
970-204	#4 Tandem-60° Standard S.S. with Cap (970-212)
970-212	Cap for Tandems (3M), Stainless Steel
970-216	Cervical Stop, Stainless Steel
970-217	Flagged Cervical Stop, Stainless Steel
970-218	Screw, S.S., f/Cervical Stop #4-40x5/16" Socket Head
970-220	3/32" Allen Wrench, Stainless Steel
970-360-30	Cap, Titanium, for Ovoid Handle
970-360-32	Locking Knob, Titanium
970-541-2	FSD Shielded Round Ovoid, SS Pivot Applicator w/Caps
970-541-40	Bucket Carrier Right, Stainless Steel
970-541-42	Bucket Carrier Left, Stainless Steel
970-541-50	2.5cm Left/Right Nylon Ovoid Cap
970-541-52	3.0cm Left/Right Nylon Ovoid Cap
970-550-2	Delclos Mini-Ovoid Long Handle Applicator w/S.S. Pivot
970-252	Sterilization Tray with Autoclave Nameplate

### **DVD ON FLETCHER COLPOSTAT TECHNIQUE**



Item #	Description
970-101	DVD on Fletcher Colpostat Technique

# DELCLOS UTERINE/VAGINAL AFTERLOADING APPLICATOR SET With Type "B" Dome Assembly.



970-670-01

The Delclos Uterine/Vaginal Type "B" Applicator was originally manufactured by Radium Chemical then Radium Accessories. The dimension from the source to tip of the dome for all dome cylinders is the same (Dimension B).

The Delclos Uterine/Vaginal Afterloading Applicator and Dome Assembly is used primarily to irradiate the vagina where the tumor extends downward from the cervix along the vaginal wall. The acrylic vaginal cylinders are 2.5 cm long permitting a maximum assembled length of 15 cm and come in diameters from 2.0 cm to 4.5 cm to accommodate different vaginal sizes. The cylinders have four stainless steel pins .1" from edge to identify the location radiographically and have an inside groove to facilitate removal with the cylinder extractor. The 15°, 30° and 45° S.S. tandems are marked every 2 cm over an 8 cm range. The dome cylinders are threaded to accommodate a 15 cm long threaded tandem.

#### Item 970-670-01 includes:

- (3) S.S. Tandems with caps 15°, 30°, 45°
- (3) S.S. Cervical stops
- (1) 15 cm Threaded S.S. Tandem with Cap for Dome
- (2) S.S. Flagged Cylinder Stop
- S.S. Flat End Vaginal Tandem with Cap
- (4) Plastic Tandems and Pushers
- (2) 3/32" S.S. Allen Wrenches (short and long handle)
- (1) S.S. Cylinder Extractor
- (6) Threaded Acrylic Domes 2.0, 2.5, 3.0, 3.5, 4.0, 4.5 cm
- (5) Cylinders for Flat End Tandem 2.5, 3.0, 3.5, 4.0, 4.5 cm
- (5) 2.0 cm Acrylic Cylinders
- (4) Acrylic Cylinders of each 2.5, 3.0, 3.5, 4.0, 4.5 cm
- (1) Sterilization Tray

**Item 970-670-02** does not include the 3 Tandems and Cervical Stops, 1 Short Handle Allen Wrench and Sterilization Tray.

Item #	Description
970-670-01	Type "B" Applicator Set with Sterilization Tray
970-670-02	Type "B" Applicator <b>Without</b> 3 Tandems, 3 Cervical Stops, 1 Wrench & Sterilization Tray

# Replacement parts for Delclos Uterine/Vaginal Afterloading Applicator With Type "B" Dome Assembly Item 970-670-01 and 970-670-02

Item #	Description
970-000	12 Plastic Tandems and Pushers
970-200	Straight Standard S.S. Tandem w/Cap
970-201	#1 - 15° Standard S.S. Tandem w/Cap
970-202	#2 - 30° Standard S.S. Tandem w/Cap
970-203	#3 - 45° Standard S.S. Tandem w/Cap
970-204	#4 - 60° Standard S.S. Tandem w/Cap
970-212	S.S. Cap for Tandem
970-216	S.S. Cervical Stop
970-217	Optional: S.S. Flagged Cervical Stop
970-218	S.S. Screw Cervical Stop #4-40 x 5/16"
970-254	Sterilization Tray with Gas Nameplate
970-670-18	15 cm Threaded S.S. Tandem for Dome
970-670-19	2.0 cm Acrylic Dome w/Thread
970-670-21	2.0 cm Acrylic Cylinder
970-670-23	15 cm Vaginal S.S. Tandem w/Flat End
970-670-24	2.5 cm Acrylic Dome w/Thread
970-670-26	2.5 cm Acrylic Cylinder
970-670-27	2.5 cm Acrylic Cylinder for Flat End Tandem

Item #	Description
970-670-29	3.0 cm Acrylic Dome w/Thread
970-670-31	3.0 cm Acrylic Cylinder
970-670-32	3.0 cm Acrylic Cylinder for Flat End Tandem
970-670-34	3.5 cm Acrylic Dome w/Thread
970-670-36	3.5 cm Acrylic Cylinder
970-670-37	3.5 cm Acrylic Cylinder for Flat End Tandem
970-670-39	4.0 cm Acrylic Dome w/Thread
970-670-41	4.0 cm Acrylic Cylinder
970-670-42	4.0 cm Acrylic Cylinder for Flat End Tandem
970-670-44	4.5 cm Acrylic Dome w/Thread
970-670-46	4.5 cm Acrylic Cylinder
970-670-47	4.5 cm Acrylic Cylinder for Flat End Tandem
970-670-49	S.S. Cylinder Extractor
970-670-52	S.S. Cylinder Stop w/Flag
970-670-54	Optional: S.S. Cylinder Stop
970-670-56	Tapered S.S. Allen Screw 4-40 x 1/4"
970-670-59	3/32" Long Handle S.S. Allen Wrench
970-670-60	3/32" Short Handle S.S. Allen Wrench

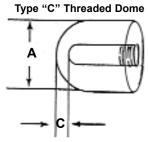
# DELCLOS UTERINE/VAGINAL AFTERLOADING APPLICATOR SET With Type "C" Dome Assembly



970-670-03

The Delclos Uterine/Vaginal Type "C" Applicator was originally manufactured by 3M. The dimension from the source to tip of dome varies for the cylinders (Dimension C).

The Delclos Uterine/Vaginal Afterloading Applicator and Dome Assembly is used primarily to irradiate the vagina where the tumor extends downward from the cervix along the vaginal wall. The acrylic vaginal cylinders are 2.5 cm long permitting a maximum assembled length of 15 cm and come in diameters from 2.0 cm to 4.5 cm to accommodate different vaginal sizes. The cylinders have four stainless steel pins .1" from edge to identify the location radiographically and have an inside groove to facilitate removal with the cylinder extractor. The 15°, 30° and 45° S.S. tandems are marked every 2 cm over an 8 cm range. The acrylic dome cylinders are threaded to accommodate a 15 cm long threaded S.S. tandem.



Dimensions		
Α	С	
2.0 cm	0.5 cm	
2.5 cm	0.8 cm	
3.0 cm	1.0 cm	
3.5 cm	1.0 cm	
4.0 cm	1.0 cm	
4.5 cm	1.3 cm	

#### Item 970-670-03 includes:

- (3) S.S. Tandems with caps 15°, 30°, 45°
- (3) S.S. Cervical Stops
- (1) 15 cm Threaded S.S. Tandem with Cap for Dome
- (2) S.S. Flagged Cervical Stop
- (1) Flat End Vaginal S.S. Tandem with Cap
- (4) Plastic Tandems and Pushers
- (2) 3/32" S.S. Allen Wrenches (short and long handle)
- (1) S.S. Cylinder Extractor
- (6) Threaded Acrylic Domes 2.0, 2.5, 3.0, 3.5, 4.0, 4.5 cm
- (5) Acrylic Cylinders for Flat End Tandem- 2.5, 3.0, 3.5, 4.0, 4.5 cm
- (5) 2.0 cm Acrylic Cylinders
- (4) Acrylic Cylinders of each 2.5, 3.0, 3.5, 4.0, 4.5 cm
- (1) Sterilization Tray

**Item 970-670-04** does not include the 3 Tandems and Cervical Stops, 1 Short Handle Allen Wrench and Sterilization Tray.

Item #	Description
970-670-03	Type "C" Applicator Set with Sterilization Tray
970-670-04	Type "C" Applicator <b>Without</b> 3 Tandems, 3 Cervical Stops, 1 Wrench & Sterilization Tray

# Replacement parts for the Delclos Uterine/Vaginal Afterloading Applicator With Type "C" Dome Assembly Item 970-670-03 and 970-670-04

Item #	Description
970-000	12 Plastic Tandems and Pushers
970-200	Straight Standard S.S. Tandem w/Cap
970-201	#1 - 15° Standard S.S. Tandem w/Cap
970-202	#2 - 30° Standard S.S. Tandem w/Cap
970-203	#3 - 45° Standard S.S. Tandem w/Cap
970-204	#4 - 60° Standard S.S. Tandem w/Cap
970-212	S.S. Cap for Tandem
970-216	S.S. Cervical Stop
970-217	Optional: S.S. Flagged Cervical Stop
970-218	S.S. Screw Cervical Stop #4-40 x 5/16"
970-254	Sterilization Tray with Gas Nameplate
970-670-18	15 cm Threaded S.S. Tandem for Dome
970-670-20	2.0 cm Acrylic Dome w/Thread
970-670-21	2.0 cm Acrylic Cylinder
970-670-23	15 cm Vaginal S.S. Tandem w/Flat End
970-670-25	2.5 cm Acrylic Dome w/Thread
970-670-26	2.5 cm Acrylic Cylinder
970-670-27	2.5 cm Acrylic Cylinder for Flat End Tandem

Item #	Description
970-670-30	3.0 cm Acrylic Dome w/Thread
970-670-31	3.0 cm Acrylic Cylinder
970-670-32	3.0 cm Acrylic Cylinder for Flat End Tandem
970-670-35	3.5 cm Acrylic Dome w/Thread
970-670-36	3.5 cm Acrylic Cylinder
970-670-37	3.5 cm Acrylic Cylinder for Flat End Tandem
970-670-40	4.0 cm Acrylic Dome w/Thread
970-670-41	4.0 cm Acrylic Cylinder
970-670-42	4.0 cm Acrylic Cylinder for Flat End Tandem
970-670-45	4.5 cm Acrylic Dome w/Thread
970-670-46	4.5 cm Acrylic Cylinder
970-670-47	4.5 cm Acrylic Cylinder for Flat End Tandem
970-670-49	S.S. Cylinder Extractor
970-670-52	S.S. Cylinder Stop w/Flag
970-670-54	Optional: S.S. Cylinder Stop
970-670-56	S.S. Tapered Allen Screw 4-40 x 1/4"
970-670-59	3/32" Long Handle S.S. Allen Wrench
970-670-60	3/32" Short Handle S.S. Allen Wrench

#### **BURNETT AFTERLOADING VAGINAL APPLICATOR SET**



970-700



970-700-02

The Burnett Afterloading Applicator is effective in reducing vaginal recurrence when used post-hysterectomy for cancer of the endometrium. Eight combinations of length and diameter are available.

# Item 970-700 Burnett Afterloading Vaginal Applicator Set includes:

- (8) Nylon cylinders
- (1) Cylinder afterloading tandem
- (1) Loading handle
- (3) Screw caps with 5.7, 7.6, 8.4 cm source carriers
- (4) Four plastic tandems and pushers
- (1) Sterilization tray

# Item 970-700-02 Burnett Afterloading Vaginal Applicator includes:

- (8) Nylon cylinders
- (1) Cylinder afterloading tandem
- (4) Plastic tandems and pushers
- (1) Sterilization tray

#### **Specifications**

Material: Nylon

**Density:** 1.14 -1.15 g/cm<sup>3</sup>

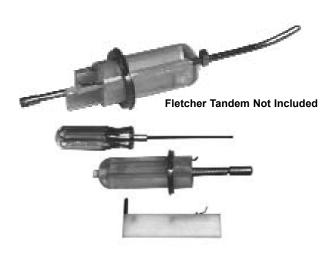
Item #	Description
970-700	Burnett Applicator Set
970-700-02	Burnett Applicator

#### Replacement parts for the Burnett Afterloading Vaginal Applicator Item 970-700, and 970-700-02

Item #	Description
970-000	12 Plastic Tandems and Pushers
970-010	12 Plastic Tandems
970-020	12 Plastic Pushers
970-212	S.S. Cap for Tandem
970-700-06	Sterilization Tray
970-700-11	"A" 20 x 66 mm Nylon Cylinder
970-700-12	"B" 20 x 87 mm Nylon Cylinder
970-700-13	"C" 25 x 87 mm Nylon Cylinder
970-700-14	"D" 30 x 87 mm Nylon Cylinder
970-700-15	"E" 35 x 87 mm Nylon Cylinder

Item #	Description
970-700-16	"F" 25 x 95 mm Nylon Cylinder
970-700-17	"G" 30 x 95 mm Nylon Cylinder
970-700-18	"H" 35 x 95 mm Nylon Cylinder
970-700-20	S.S. Screw Cap for Source Carrier
970-700-22	S.S. Loading Handle for Screw Cap w/Carrier
970-700-25	5.7 cm Long Source Carrier
970-700-27	7.6 cm Long Source Carrier
970-700-28	8.4 cm Long Source Carrier
970-700-30	S.S. 6" Afterloading Tandem with Cap for Cylinders
970-700-30-17	Sleeve Nylon Centering Set, for A,B,C,D,E,F,G,H

#### **VAGINAL AFTER-LOADING CYLINDER SET**



The Vaginal After-Loading Acrylic Cylinders are of special value where cervical tumors are large and exophytic, where the uterus has been removed, when the vagina is quite small (sometimes due to post irradiation changes) or when the cervix cannot be identified or entered because of tumor deformity. Often the applicator can be placed without more than local infiltrative anesthesia into the labia; packing is not required to hold the applicator in place. It can be adapted to irradiate both cervical and vaginal cancers and is simple to apply and afterload.

The vaginal acrylic cylinder has a 6.6 mm diameter center hole for a Fletcher tandem or an afterloading tandem. If using a afterloading tandem, a threaded delrin plug is screwed into the tip. The acrylic cylinder has two channels for the rectangular afterloading sliders and an adjustable stainless steel suture ring. The rectangular afterloading sliders are made of delrin and use a vertical source. The separation between vertical sources in the afterloading sliders is 15 mm for the 33 mm cylinder and 20 mm for the 38 mm and 40 mm cylinders. A locking spring secures the afterloading slider in the cylinder and a pressure spring holds the source in the afterloader. A source pusher is used to remove sources. Optional Lead sliders can be placed into the after-loading channel to provide shielding to the rectum or bladder.

Original paper printed in OBSTETRICS AND GYNECOLOGY, Vol. 40, No. 1, July 1972, "A New After-Loading Applicator for Treatment of Cancer of the Cervix and Vagina" by William J. Peeples, MD ET AL, Norfolk General Hospital, Norfolk, VA.

#### Vaginal Afterloading Acrylic Cylinder Set includes

- (1) Acrylic Cylinder
- (1) Threaded delrin plug
- (2) Rectangular delrin afterloading sliders
- (1) 6 cm threaded stainless steel afterloading barrel with cap
- (1) Adjustable stainless steel suture ring with screw
- (1) 3/32" ball hex driver
- (1) Source pusher for the rectangular afterloading slider

#### **Specifications**

#### Vaginal Afterloading Cylinder

Material: Acrylic Density: 1.185 g/cm³

**Item 976-033:** 3.3 cm dia. x 12 cm L **Item 976-038:** 3.8 cm dia. x 12 cm L **Item 976-040:** 4.0 cm dia. x 12 cm L

Afterloading Slider Material: Delrin Density: 1.425 g/cm³ Sterilization: Gas only

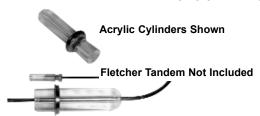
DO NOT clean with alcohol this may fracture the acrylic.

Item	Vaginal Afterloading Acrylic Cylinder Set
976-033	33 mm
976-038	38 mm
976-040	40 mm

Item	Accesories and Replacement Parts
970-000	12 Plastic Tandems and Pushers
970-010	12 Plastic Tandems
970-020	12 Plastic Pushers
976-042	Source Pusher
976-065	Optional Lead Slider for Vaginal Cylinder
977-065-33	33 mm Adjustable S.S. Suture Ring
977-065-40	40 mm Adjustable S.S. Suture Ring
977-066	Optional Lead Slider for Vaginal Cylinder w/Lock
977-067	S.S. Ball Style Hex Driver
977-068	6 cm Afterloading S.S. Barrel w/Cap
977-069	S.S. Cap for Afterloading Barrel
977-070	Delrin Threaded Plug for Cylinders

#### **VAGINAL CYLINDERS**

With 6.6 mm Diameter Tandem Hole



The Vaginal Acrylic or UHMW Cylinders are 12 cm long with a 6.6 mm diameter hole through the center for a Fletcher Tandem. Included is an adjustable stainless steel collar with suture holes for securing to the patient and a 3/32" ball socket type screwdriver for tightening the collar screw. **The tandem is not included.** 

Item #	Description
970-000	12 Plastic Tandems and Pushers
970-010	12 Plastic Tandems
970-020	12 Plastic Pushers
977-019	19 mm Dia. Acrylic Cylinder w/Suture Ring
977-025	25 mm Dia. Acrylic Cylinder w/Suture Ring
977-032	32 mm Dia. Acrylic Cylinder w/Suture Ring
977-038	38 mm Dia. Acrylic Cylinder w/Suture Ring
977-060	Custom Made Acrylic Cylinder Only - State Size
977-065-19	19 mm Adjustable S.S. Suture Ring <b>Only</b>
977-065-25	25 mm Adjustable S.S. Suture Ring <b>Only</b>
977-065-33	33 mm Adjustable S.S. Suture Ring <b>Only</b>

#### Optional:

A delrin threaded plug (Item 977-070) may be used to close the tip of the vaginal cylinder. An afterloading stainless steel barrel (Item 977-068) may be screwed in to the cylinder to hold the source tandem.

#### **Specifications**

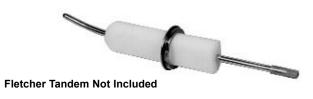
Sterilization: Gas only

Do Not clean with alcohol, this may fracture the acrylic.

Acrylic Density: 1.185 g/cm<sup>3</sup> UHMW Density: 0.94 g/cm<sup>3</sup>

Item #	Description	
977-065-38	38 mm Adjustable S.S. Suture Ring Only	
977-067	Ball Style Hex Driver	
977-068	Afterloading Stainless Steel Barrel w/Cap	
977-069	S.S. Cap for Afterloading Barrel	
977-070	Delrin Threaded Plug for Cylinders	
977-119	19 mm Dia. UHMW Low Density Cylinder w/Suture Ring	
977-125	25 mm Dia. UHMW Low Density Cylinder w/Suture Ring	
977-133	33 mm Dia. UHMW Low Density Cylinder w/Suture Ring	
977-138	38 mm Dia. UHMW Low Density Cylinder w/Suture Ring	
977-160	Custom Made - UHMW Low Density Cylinder Only	

#### **OBLONG UHMW LOW DENSITY CYLINDER**



Item #	Description	
978-638	UHMW Low Density Cylinder w/Suture Ring & Hex Driver	
977-068	Optional - S.S. Afterloading Barrel w/Cap	
977-070	Optional - Delrin Threaded Plug	

The oblong UHMW, Low Density Cylinder measures 20 mm wide x 38 mm diameter x 12 cm long with an adjustable stainless steel suture ring. It can be used with a tandem (not furnished) or it can be filled with radiation sources using the stainless steel after-loading barrel (Item 977-068) and a front end screw-in delrin plug (Item 977-070). The Plastic Tandem/Pusher (Item 970-000) source carrier can also be used. A ball hex driver is included for locking the suture ring in place.

#### **Specifications**

**UHMW Density:** 0.94 g/cm³ **Sterilization:** Gas Only

#### NYLON CYLINDER WITH LEAD OR TUNGSTEN



The Nylon Cylinder with Lead or Tungsten has an 11 mm lead or tungsten bottom and an adjustable stainless steel suture ring. The lead or tungsten is coated with a clear polyurethane paint and easily cleaned by removing six screws with a 7/64" allen wrench (included). This unit can be used with a tandem (not furnished) or it can be filled with radiation sources using the stainless steel afterloading barrel (Item 977-068) and a front end screw-in delrin plug (Item 977-070).

The Plastic Tandem/Pusher (Item 970-000) source carrier can also be used. A ball hex driver is included for locking the suture ring in place.

#### **Specifications**

Cylinder Weight: .8 lbs Diameter: 33 mm Length: 12 cm

Item #	Description	
979-070	Lead/Nylon Cylinder w/Suture Ring and 2 Wrenches	
979-072	Tungsten/Nylon Cylinder w/Suture Ring and 2 Wrenches	
977-068	Optional - S.S. Afterloading Barrel w/Cap	
977-070	Optional - Delrin Threaded Plug	

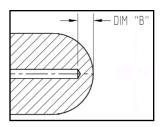
Custom diameters and lengths can be made to order.

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#### **ACRYLIC VAGINAL CYLINDERS FOR VARIAN GAMMAMED PLUS HDR**



977-32345 Shown with Tandem and Lock Collar



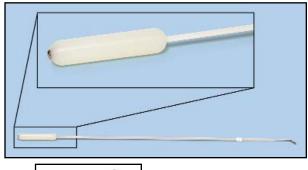
These acrylic vaginal cylinders are made for use with the Varian GammaMed Plus HDR system or can be used as spacers in proton therapy.

The cylinder channel accomodates a tandem with a 3.0 mm diameter. The end of the cylinder is threaded to screw in the collet of the applicator.

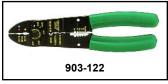
Item #	Acrylic Vaginal Cylinder	Dimension B
977-3161	1.6 cm Diameter x 14cm Long	1.0 mm
977-3162	1.6 cm Diameter x 14cm Long	2.0 mm
977-3163	1.6 cm Diameter x 14cm Long	3.0 mm
977-31635	1.6 cm Diameter x 14cm Long	3.5 mm
977-3204	2.0 cm Diameter x 14cm Long	4.0 mm
977-32345	2.3 cm Diameter x 14cm Long	4.5 mm
977-3265	2.6 cm Diameter x 14cm Long	5.0 mm
977-3306	2.6 cm Diameter x 14cm Long	6.0 mm

#### HDR SIMON-HEYMAN APPLICATORS

#### For Iridium 192 Ribbons









The Simon-Heyman Afterloading Applicators are used in the treatment of endometrial cancer. These applicators are a disposable item and intended for single use only. Each applicator has a radio-opaque marker in the tip, a stainless steel oburator, and is individually numbered. There are 10 applicators in each package. Color variations for capsules are due to the material. These applicators can also be used with Iridium-192 ribbons with active lengths of 20 mm or 30 mm.

There may be some scatter in CT from the stainless steel screw in the applicator tip. Remove the stainless steel obturator before CT.

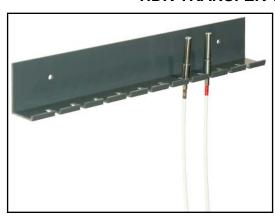
HDR connections to the Simon-Heymam applicator is via 15ga. tubing, which is the same size as prostate needles. The source depth is 250 mm from end to tip.

#### For use with Iridium 192 Ribbon

An Iridium 192 ribbon can be inserted into the 15ga. tubing. The end of the tubing can be secured by heat sealing or by using the stainless steel sleeve (Item 903-120) that can be crimped closed.

Item #	Simon-Heyman Disposable Applicator	Qty
903-0420	4.0 mm Dia. x 20 mm L. Active Area x 250 mm	10/Pkg
903-0430	4.0 mm Dia. x 30 mm L. Active Area x 250 mm	10/Pkg
903-0620	6.0 mm Dia. x 20 mm L. Active Area x 250 mm	10/Pkg
903-0630	6.0 mm Dia. x 30 mm L. Active Area x 250 mm	10/Pkg
903-06420	6.4 mm Dia. x 20 mm L. Active Area x 250 mm	10/Pkg
903-06430	6.4 mm Dia. x 30 mm L. Active Area x 250 mm	10/Pkg
903-0820	8.0 mm Dia. x 20 mm L. Active Area x 250 mm	10/Pkg
903-0830	8.0 mm Dia. x 30 mm L. Active Area x 250 mm	10/Pkg
903-1020	10.0 mm Dia. x 20 mm L. Active Area x 250 mm	10/Pkg
903-1030	10.0 mm Dia. x 30 mm L. Active Area x 250 mm	10/Pkg
903-120	Sleeve, Crimping, Stainless Steel, f/Iridium Ribbon	25/Pkg
903-122	Crimping Tool For 903-120	Each
903-123	Cutter Tool For 903-0420 to 903-1030	Each

#### HDR TRANSFER TUBE HOLDER FOR 10 TUBES



#### **Specifications**

**Slot Width:** 3/16" (4.76mm) **Slot Depth:** 5/8" (15.88) **Front Lip Height:** .3" (0.7 cm)

Overall Size: 11" W x 1.16" Deep x 1.67" H (27.9 x 2.94 x 4.2 cm)

Material: Gray PVC

Item	Description
950-098	HDR Transfer Tube Holder for 10 Tubes