



Expect Service

Radiation Products Design Inc

INSTRUCTIONS

RPD INFORMATION

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RPD PRODUCT INFORMATION

Item Number	Description
970-360	Weeks CT Mini Ovoid S.S. Pivot Applicator Set with Tray

THIS PRODUCT IS NOT STERILE AND IS TO BE USED BY AUTHORIZED PERSONNEL ONLY.

RADIATION PRODUCTS DESIGN INC assumes no liability for consequential damages of any kind for this material when used or for any direct or indirect consequences of its use or misuse by their customer.

SET INCLUDES

- (1) Applicator with Stainless Steel Pivot
- (2) Shielded Gold Bucket Carriers
- (2) CT Dummy Bucket Carriers for Left or Right Side
- (2) 2.0 cm Diameter High Temperature Plastic Ovoid Caps
- (2) 2.5 cm Diameter High Temperature Plastic Ovoid Caps
- (2) 3.0 cm Diameter High Temperature Plastic Ovoid Caps
- (4) 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



DESCRIPTION

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 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/cm³

STERILIZATION INSTRUCTIONS

CT Applicator, Ovoid Caps and Tandems

Cleaning: Use detergent similar to Klenzyme®, Manu-Klenz® or NpH-Klenz® and water. Ultrasound cleaner may be used.

Sterilization: Steam Autoclave.

Sterilization Tray

Sterilization: Steam Autoclave at normal cycle.

Warning: **DO NOT** Flash Steam Sterilize, may cause nylon coating to flake off. Not certified for Sterrad.

BUCKET CARRIER INSERTION INSTRUCTIONS

- A. Hold the bucket carrier horizontally with the flat area of the handle facing up. The bucket will hang down, allowing the radiation source to be loaded.
IMPORTANT: Load source in a protected area, then transport to patient area.
- B. Remove the ovoid handle caps from the patient applicator. Remove the patient left gold bucket carrier marked "L" on the flat area of the handle, from the portable safe. Hold the bucket carrier in a downward angle and rotate the bucket carrier 180 degrees so the flat area marked "L" is down. Now the bucket is straight with the carrier handle and can be inserted into the patient left applicator ovoid handle tube easily. After inserting 3 cm, rotate the bucket carrier 180° so the flat area marked "L" is up. Continue to insert the bucket carrier until it touches the tubing bend. Rotate the handle CW or CCW slightly while applying light forward pressure until the bucket goes past the tubing bend and into the ovoid head, **DO NOT FORCE**. The bucket carrier handle groove will then align with the end of the ovoid handle tube.
- Repeat steps for the patient right bucket carrier marked "R" on the flat area of the handle.
- To remove the bucket carrier, rotate the handle CW or CCW slightly to get past the tubing bend, **DO NOT FORCE**. Then place in portable safe. Replace the ovoid handle caps on the applicator. A spring inside of the ovoid handle cap ensures that bucket carrier is always pushed forward into the ovoid head.
- C. Repeat for CT dummy bucket carriers.

CT INSTRUCTIONS

- A. CT can be taken through the plastic ovoid heads and caps up to the stainless steel handle.
- B. CT can be taken through the aluminum tandem and plastic cervical stop.

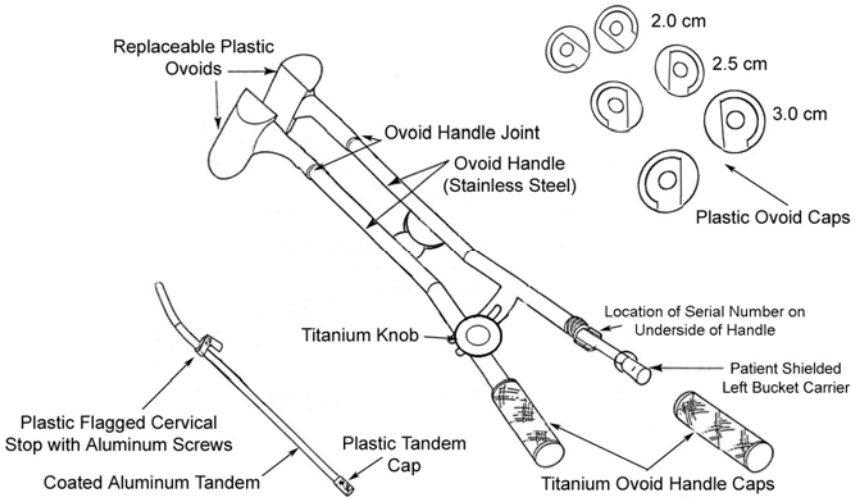
BUCKET CARRIER DENSITY

The bucket carriers are made of 24K Gold:	Density 19.3g/cm ³
Above replaces previous bucket carriers that were made of Tungsten:	Density 17g/cm ³

PAPERS

- A. Three-Dimensional Applicator System for Carcinoma of the Uterine Cervix
 Author: K. J. Weeks, Ph.D. and G.S. Montana, M.D.
 Int. J. Radiation Oncology Biol. Phts., Vol. 37, No. 2, pp. 455-463, 1997
- B. Carcinoma of the uterine cervix: a 3D-CT analysis of dose to the internal, external and common iliac nodes in tandem and ovoid applications
 Author: Wade J. Gebara, Kenneth J. Weeks, Ellen L. Jones, Gus S. Montana, Michell S. Anscher
 Radiotherapy and Oncology 56 (2000) 43-48
- C. Brachytherapy Object-oriented Treatment Planning Based on Three-dimensional Image Guidance
 Author: Kenneth J. Weeks, Ph.D.
 RSNA Categorical Course in Brachytherapy Physics 1997; pp 79-86
- D. Computer Axial Tomography Tandem and Ovoids (CATTO) Dosimetry: Three-Dimensional Assessment of Bladder and Rectal Doses
 Author: Wade J. Gebara, M.D., Kenneth J. Weeks, Ph.D., Carol A. Hahn, M.D., Gustavo S. Montana, M.D., Michell S. Anscher, M.D.
 Radiation Oncology Investigations 6:286-275 (1978)

WEEKS CT APPLICATOR DIAGRAM



INSPECTION TEST

Separate your Weeks CT Colpostat into two halves and conduct tests A and B on each half as follows:

MECHANICAL TEST A

Conduct this test on each half of the Colpostat:

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 no other tests need to be done. If Test A passes, continue to Test B.

PRESSURE TEST B

Conduct this test on each half of the Colpostat:

1. Remove the ovoid handle cap from the end of the ovoid handle.
2. Remove the bucket carrier.
3. Stand the colpostat in a beaker of water to a depth above the ovoid handle joint.
4. Apply slight air pressure on the open end of the colpostat handle (using for example, a 10cc syringe connected to surgical tubing connected to the colpostat handle), and look for air bubbles escaping from the ovoid or ovoid handle joint. If bubbles are seen, Test B fails. If Test B passes, the ovoid is solidly attached to the ovoid handle and no immediate action is necessary.

IF TEST A OR B FAILS STOP USING WEEKS CT COLPOSTAT FOR PATIENT THERAPY. Send complete unit in for repair, including bucket carriers, to Radiation Products Design, Inc.

TANDEM TEST C

Visually inspect each tandem for flaking off of the coating or any signs of corrosion.

OVOID CAP TEST D

Visually inspect each ovoid cap inside for loose half cylinder. If loose, return for repair.

The above tests can be conducted at Radiation Products Design, Inc. for a minimal charge.

REPLACEMENT PARTS

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 Dummy Bucket Carrier for Right or Left Side
970-360-30	Cap, Titanium, for Ovoid Handle
970-360-32	Knob, Locking, Titanium
970-360-50	Ovoid Cap, Right, 2.0cm, High Temperature Plastic, No Tungsten
970-360-51	Ovoid Cap, Left, 2.0cm, High Temperature Plastic, No Tungsten
970-360-52	Ovoid Cap, Right, 2.5cm, High Temperature Plastic, No Tungsten
970-360-53	Ovoid Cap, Left, 2.5cm, High Temperature Plastic, No Tungsten
970-360-54	Ovoid Cap, Right, 3.0cm, High Temperature Plastic, No Tungsten
970-360-55	Ovoid Cap, Left, 3.0cm, High Temperature Plastic, No Tungsten
970-360- Repair	Replacement Ovoid Body
970-371	#1 - 15°, 8mm Diameter Tandem, Coated Aluminum with Cap
970-372	#2 - 30°, 8mm Diameter Tandem, Coated Aluminum with Cap
970-373	#3 - 45°, 8mm Diameter Tandem, Coated Aluminum with Cap
970-374	#4 - 60°, 8mm Diameter Tandem, Coated Aluminum with 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
970-645-06	Sterilization Tray