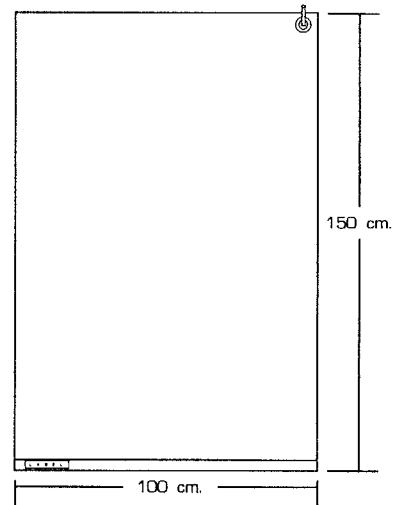


**VAC FIX CUSHIONS: STANDARD SIZES AND SHAPES** - special sizes, shapes and liter fill available upon request

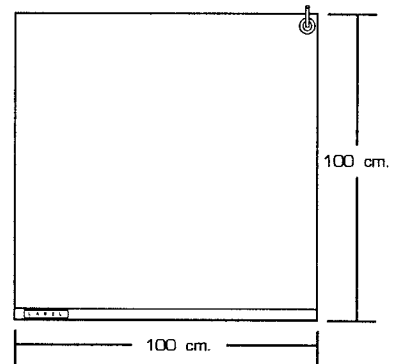
**150x100cm: PELVIS** MADE FOR FIXATING THE WHOLE BODY. CAN BE USED FOR TREATMENT IN THE PELVIC REGION AND IN THE ABDOMINAL REGION, AS WELL AS WHOLE BODY TREATMENT.

**VF-100** (65 LITER) **VF-101** (70 LITER) **VF-102** (75 LITER)



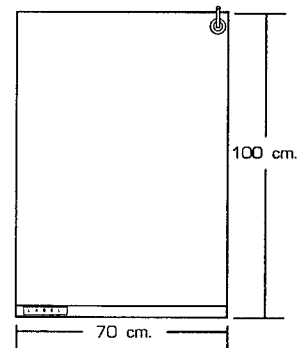
**100x100cm: THORAX** MADE FOR FIXATING THE UPPER PART OF THE BODY. CAN BE USED FOR TREATMENT OF BREAST CANCER, LUNG TUMORS, ESOPHAGEAL CANCER, ETC.

**VF-111** (35 LITER) **VF-112** (40 LITER) **VF-113** (45 LITER) **VF-114** (50 LITER)



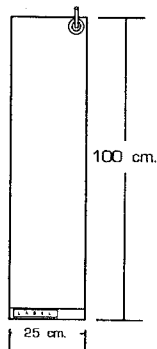
**70x100cm: BREAST** MADE FOR FIXATING THE UPPER BODY. THE NARROWNESS OF THE BAG ALLOWS FOR SECURE MOLDING WITHOUT EXCESS BAG MATERIAL.

**VF-119-25** (25 LITER) **VF-119-30** (30 LITER) **VF-119-35** (35 LITER)  
**VF-119-40** (40 LITER)

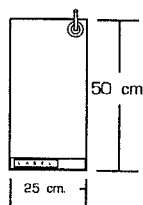


**SMALL STANDARD** FIXATE AN ARM, A LEG, OR USE IN CONJUNCTION WITH OTHER BAGS (I.E. TO FIXATE THE FRONT OF THE NECK BY CONNECTING TO A BACK CUSHION USING VELCRO TAPE.)

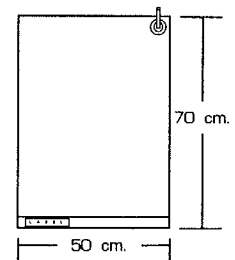
**VF-121** (6.5 LITER)  
**VF-122** (7.5 LITER)



**VF-131** (1.75 LITER)  
**VF-132** (2 LITER)  
**VF-133** (2.25 LITER)

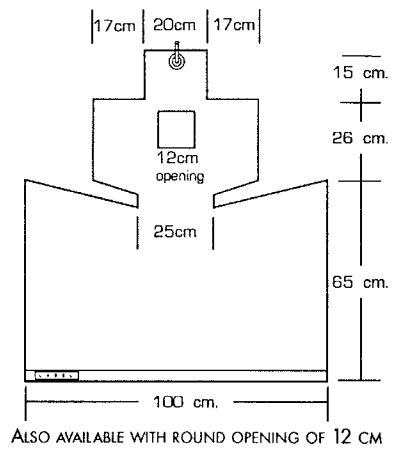


**VF-142** (12.5 LITER)  
**VF-143** (15 LITER)



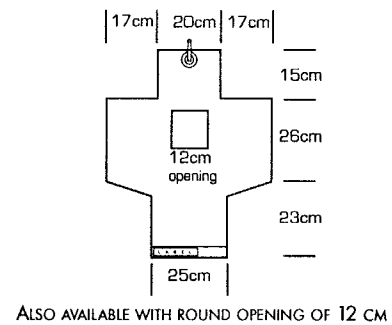
**TYPE S1: HEAD AND NECK REGION** DESIGNED TO FIXATE THE HEAD AND THE UPPER PART OF THE THORAX. THE PATIENT CAN BE PLACED EITHER IN THE SUPINE OR PRONE POSITION.

- VF-150** (15 LITER)   **VF-151** (17.5 LITER)   **VF-152** (20 LITER)  
**VF-153** (25 LITER)



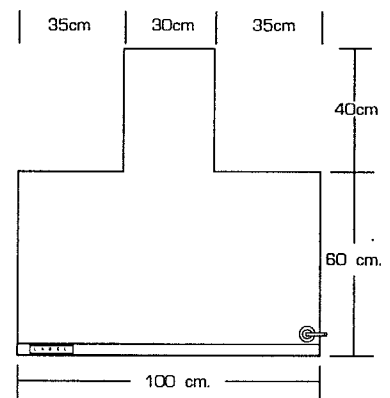
**TYPE S2: BRAIN TUMORS** DESIGNED FOR FIXATION OF THE FACE, IT IS USED TOGETHER WITH THE **S3** CUSHION. THE **S2** CUSHION IS PLACED ON THE FACE OF THE PATIENT AND CONNECTED TO THE BACK **S3** CUSHION USING VELCRO STRIPS.

- VF-160** (3 LITER)   **VF-161** (4 LITER)   **VF-162** (5 LITER)  
**VF-163** (6 LITER)



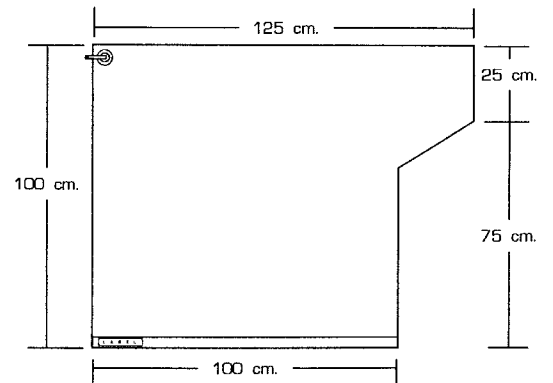
**TYPE S3: LARYNGEAL, ESOPHAGEAL, AND UPPER THORACIC CANCERS** DESIGNED FOR FIXATION OF THE HEAD AND NECK, AS WELL AS THE UPPER PART OF THE THORAX.

- VF-171** (22.5 LITER)   **VF-172** (25 LITER)   **VF-173** (30 LITER)



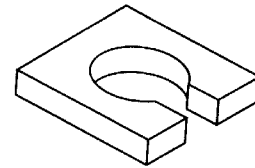
**TYPE S4: BREAST CANCER** DESIGNED FOR FIXATING THE UPPER PART OF THE THORAX WITH AN ARM PLACED IN AN ANGLED POSITION.

- VF-190** (50 LITER)

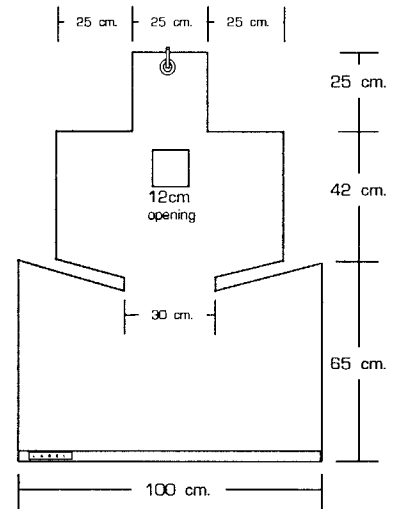


**VF-530: SUPPORT PAD FOR HEAD FIXATION** THE VF-530 SUPPORT PAD IS USED FOR KEEPING THE VAC FIX CUSHION CLOSE TO THE SHOULDERS DURING FIXATION (THIS IS TO ENSURE A CLEAR VIEW OF THE HEAD AND NECK AREA FROM THE SIDE).

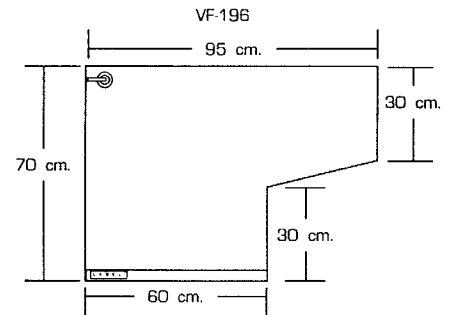
PLACE THE SUPPORT PAD AROUND THE HEAD OF THE PATIENT (BE SURE THE VAC FIX CUSHION IS BETWEEN THE SHOULDERS AND THE SUPPORT PAD).



SAMPLE VARIATION: TYPE S1: HEAD AND NECK REGION PREFERRED FOR PRONE POSITIONING.



SAMPLE VARIATION: TYPE S4: BREAST CANCER



## BUILD UP FOR VAC FIX

Fieldsize: 10X10cm FSD 100cm  
Ionization chamber: NACP 05 - 05

### **AT RADIATION OF 10 MVR:**

SKIN DOSE: 28.5%  
2 X .15MM (PLASTIC COVERING OF VAC FIX BAG): 34.2%  
**BUILD UP** DUE TO PLASTIC COVERING: 5.7%

SKIN DOSE: 28.5%  
25 MM POLYSTYRENE SPHERES + 2 X .15MM (PLASTIC) 42.6%  
**BUILD UP** DUE TO PLASTIC COVERING AND SPHERES: 14.1%

### **WITH COBALT:**

SKIN DOSE: 69.6%  
2 X .15MM (PLASTIC COVERING OF VAC FIX BAG): 80.0%  
**BUILD UP** DUE TO PLASTIC COVERING: 10.4%

SKIN DOSE: 69.6%  
25 MM POLYSTYRENE SPHERES + 2 X .15MM (PLASTIC) 99.5%  
**BUILD UP** DUE TO PLASTIC COVERING AND SPHERES: 29.9%

NOTE: At 10 MVR the build up effect of the 2 layers of 0.15mm plastic foil is only 5.7% and two layers of the foil plus 25mm thickness of spheres (polystyrene fill) is only 14.1%. *The spheres alone have a build up effect of 8.4%.*

Using **cobalt** is very different. A big build up effect is apparent. We strongly advise that two Vac Fix shells be made for the patients. One for prone position having the back uncovered, and one for supine position having the front uncovered. In this way the build up effect is completely avoided.

Air Equivalence: - 980

Air is defined at - 1000 C.T. unit

## DISCLAIMER

The Vac Fix system is designed to aid in patient positioning and immobilization during radiation therapy treatments. This manual illustrates some of the uses of the Vac Fix bag. It should not be construed as a guide to patient positioning for radiation treatment. The latter needs to be individualized for the given patient and malignancy, and is the responsibility of the radiation therapist.

Although the Vac Fix system has been designed to maintain patient position for repeated therapy sessions, it is not error free, and patient position must be verified prior to each treatment. Treatment planning by the therapist must take into consideration possible alterations in the radiation field caused by passage of ionizing radiation through the Vac Fix bag, including but not limited to potential buildup effects at the skin level.

S&S Par Scientific and S&S X-Ray Products, Inc. can assume no responsibility for complications or failures of radiation treatments, nor for the misuse of any component of the Vac Fix system.