

Waterproofing Devices for Farmer-type Chambers

Various waterproofing kits have been developed by CNMC to effectively waterproof a Farmer-type 0.6 cc dosimetry ionization chamber for use in water phantoms. Their unique design has a distinct advantage over rubber or latex sheaths by eliminating the possibility of talcum powder contamination.

The heart of the design is an acrylic cap that has been machined down to 1 mm wall thickness (compatible with TG- 51 protocol) at the chamber thimble area. This housing assembly is designed to accept a Farmer-type ion chamber. A flexible tube fits snugly over the open end of the cap, and the addition of two rubber O-rings insures a watertight seal.

Since various manufacturers' chambers may exhibit minor physical differences, CNMC offers several versions to accommodate most chambers.

As with latex and rubber sheaths, the flexible tubing may harden over time and should be inspected before use and replaced periodically. However, this tubing is relatively inexpensive and is readily obtained from CNMC or through the hospital's surgical supplier.

WPK-75 for NE chambers

This set consists of an acrylic cap with M 11 x .75 thread which fits NE Farmer-type chambers, six 5/8 in diameter Penrose drainage tubes and two 5/8 in diameter O-rings.

WPK-75C for Capintec PR-06C

This set consists of a larger 3/4 in acrylic cap with M 11 x .75 thread, six 3/4 in diameter Penrose drainage tubes, and two 3/4 in diameter O-rings to accommodate the cable connector of the PR-06C. It also fits NE Farmer-type chambers.

WPK-100 for PTW Farmer® chambers

This set consists of an acrylic cap with M 11 x 1 thread which fits all PTW Farmer®-type chambers, six 5/8 in diameter Penrose drainage tubes and two 5/8 in diameter O-rings.



WPK-75 & WPK-100

WPK-691 Universal waterproofing kit

This set contains a uniquely designed acrylic waterproofing cap without the threads. An internal O-ring with air bypass holds all Farmer-type ion chambers securely, including the Capintec PR-06G and PR-06C.

The set includes six 3/4 in diameter Penrose drainage tubes that can accommodate the cable connector of the PR-06C without the need for machining.

2513A Waterproofing sheath

These latex sheaths are molded to conform to all outside dimensions of PTW, NE and Capintec PR-06G Farmer-type ion chambers. To keep the inside walls from sticking while in storage, the sheaths are supplied dusted with talcum powder. The sheaths are more difficult to install, remove and store, but they can be used successfully to waterproof Farmer-type chambers providing that extreme caution is taken to prevent talcum powder contamination of the chamber.

PTW Farmer® is a registered trademark of PTW Freiburg and PTW New York.

Features

- ▶ No danger of talcum powder contamination
- ▶ Economical – replace only inexpensive rubber tubing
- ▶ Easy insertion and removal of ion chamber
- ▶ Assured atmospheric communication
- ▶ Compatible with the TG-51 protocol