



Package Type

Designed as a reusable Type B package for the shipment of solid and liquid radioactive materials, primarily medical radioisotopes.

Certification

Certified by the US NRC as a Type B(U) Package - the package meets all the requirements of 10 CFR 71 and the IAEA SSR-6 2018 Regulations for the Safe Transport of Radioactive Material. Validations for other countries are available.

Description

The SAFKEG® 3977 HS package is designed to be robust and simple to use. The packaging consists of a stainless steel Outer Keg (Design No 3977) which carries a stainless steel and depleted uranium (DU) shielded Containment Vessel (CV) Design No 3978, within a thermally insulating and shock absorbing cork packing set.

The Outer Keg is fabricated in stainless steel with a flange type lid fastened by studs and nuts.

The CV is a DU shielded vessel fabricated from stainless steel incorporating a bolted lid fitted with double O-ring seals. Within the CV a variety of confinement inserts can be used to secure the contents and provide additional shielding.

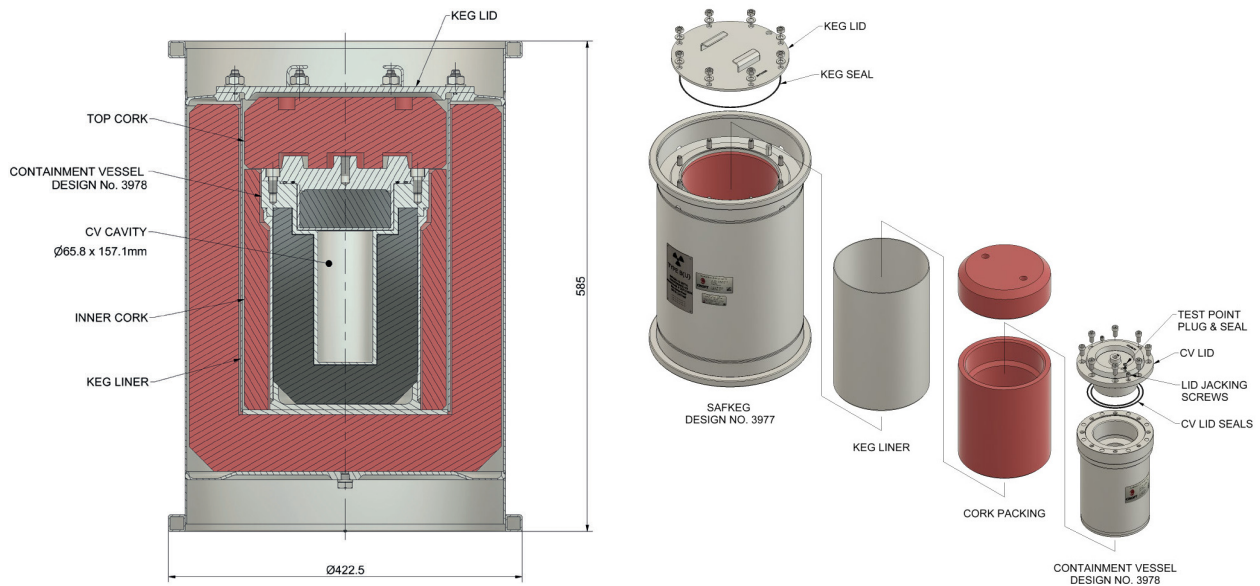
Containment / Shielding

The containment system consists of the CV assembly: the containment being provided by the welded stainless cavity walls and the flange closure fitted with double O-ring seals. The CV lid is provided with a test point for leakage testing the containment system in accordance with ANSI N14.5.

The CV has 48 mm of DU shielding, with additional shielding provided by a variety of inserts available to carry the contents (this includes thin walled stainless steel inserts to maximise internal space to thick walled tungsten inserts to maximise shielding).



Section through Package Design No 3977A



Approved Contents

- The contents are solid, liquid and gaseous radioactive materials carried in suitable primary containers to aid operations and prevent contamination of the CV. The permitted radionuclides are numerous and varied and include a range of radiopharmaceuticals, including Molybdenum-99 (Mo-99), Lutetium-177 (Lu-177), Actinium-225 (Ac-225), Krypton-79 (Kr-79), Xenon-133 (Xe-133), Iodine-131 (I-131) plus others.
- The radioactive contents are limited by the amount of shielding (including supplementary shielding provided by the confinement insert) together with a maximum contents heat output of 30 watts.
- The existing inserts may be augmented with additional shielding where required.

Modes of Transport

By road, rail, sea and air.

Physical Data

Component	Outer Keg Design No 3977	Containment Vessel Design No 3978	Tungsten Insert Design No 3982	Tungsten Insert Design No 3985	Stainless Steel Insert Design No 4109
Dimensions					
External Diameter (mm)	424	200	65	65	65
External Height (mm)	585	302.5	153	153	153
Internal Diameter (mm)	246	65.8	12	31	50
Internal Height (mm)	375	157.1	95	114	113
Weights					
Tare Weight (kg)	40.6	109.6	9.2	7.9	1.2
Maximum Permitted Contents Weight (kg)	Contents limits are dependent upon content type and confinement insert. Please contact Croft for further information.				
Maximum Gross Weight of Package (including Contents) (kg)					