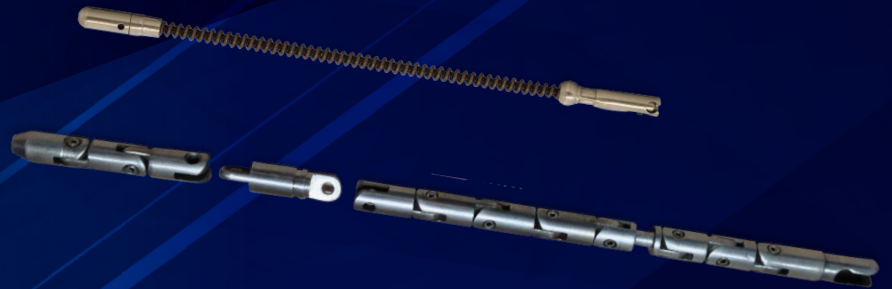


SELENIUM 75 (Se-75)

SEALED RADIOACTIVE SOURCES



The effectiveness of gamma radiography relies on the ability to deliver sufficient radiation to penetrate the weld and generate an image on the radiographic film that possesses satisfactory resolution and contrast.

Isotopes with low gamma energies are inadequate in providing high-quality results since they struggle to penetrate the object being imaged.

However, Se-75, with its gamma spectrum ranging from 66 keV to 401 keV and featuring two highly intense lines at 136 keV and 265 keV, overcomes this limitation and offers superior image quality.

- **Half Life:**
(119.8 days) is 60 % more than Ir-192 (74 days).
- **Steel Working Thicknesses:**
from 2 mm to 25 mm
- **Exposure Rate Constant at 1 m :**
0,203 R-m²/hr-Ci
- **Less Dose Rate:**
comparing with Ir-192 (55µSv/hr/GBq at 1 meter for Se-75 and 130µSv/hr/GBq at 1 meter for Ir-192)
- **Radiation Area:**
is more favourable (± 13 meters) when compared with Ir-192 (± 28 meters).
- **HVL:** Fe 24 mm, Tg 2,7 mm
- **TVL:** Fe 58 mm, Tg 8,2 mm
- **Only One reloading per year**
with a source of Se-75 (100 Ci).

Your **NDT** partner

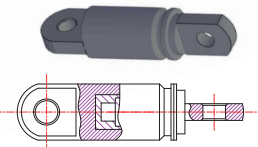


SELENIUM 75 (se-75)

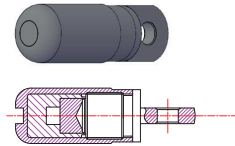
SEALED RADIOACTIVE SOURCES

DESCRIPTION

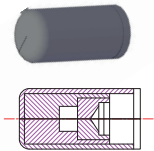
Double Capsule containing the isotope as pressed selenium powder. Internal Vanadium capsule pulse laser welded, external stainless steel capsule argon arc welded.



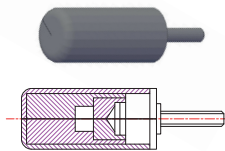
SR-17 Capsule



SR-18 Capsule



GS-M11 Capsule



GS-M12 Capsule

TECHNICAL SPECIFICATIONS

Main Application	Gamma radiography
Se-75 Half Life	119,8 days
Recommended Working Life	2 years
Se-75 Capsules Types	SR, GS
Activity (depending dimensions)	Max 150 Ci (5500 GBq)
Certificate Material Special form	Certified
Material	Vanadium, Stainless Steel
Identification	Unique Serial Number

FOCAL SPOT SIZES		ACTIVITY RANGE	
Active Diameter (mm)	Active Height (mm)	GBq	Ci
1.0	1.0	74 - 222	2 - 6
1.5	1.5	370 - 555	10 - 15
2.0	2.0	740 - 1295	20 - 35
2.5	2.5	1,480 - 2,220	40 - 60
3.0	3.0	2,590 - 3,515	70 - 95
3.5	3.5	3,700 - 4,810	100 - 130

CAPSULE DIMENSIONS AND SAFETY PERFORMANCE TESTING

Se-75 Capsule Type	External Dimensions ø (mm) x h (mm)	External Capsule Material	ISO classification
SR-17 for EXERTUS CIRCA/RID-Se4P/Light	6.7 x 27	Steel 12X18H10T (321AISI)	C 63545
SR-18 for EXERTUS DUAL 60/120	7.15 x 23.5	Steel 12X18H10T (321AISI)	C 63545
GS-M11	6 x 12	Steel 12X18H10T (321AISI)	C 63545
GS-M12	6 x 20	Steel 12X18H10T (321AISI)	C 63545

Your **NDT** partner



contact@osерix.com | www.osерix.com