



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS

CERTIFICATE USA/0517/S, REVISION 6

East Building, PHH-23
1200 New Jersey Ave, SE
Washington, D.C. 20590

This certifies that the sources described have been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - Eckert & Ziegler Isotope Products source capsule Models 3224-04, 3224-14, 3901-1 and 3901-2.
2. Source Description - Cylindrical single encapsulations made of Type 304 or 304L stainless steel (Models 3224-04 and 3901-2) or titanium (Models 3224-14 and 3901-1) with a 0.25 mm (0.010 in.) thick integral window at one end and fusion seal welded. Approximate outer dimensions are 3.0 mm (0.12 in.) in diameter and 5.0 mm (0.2 in.) in length. Construction of the Models 3224-04 and 3224-14 shall be in accordance with either attached IPL Drawing No. 3224, Rev. B, Sheet 3 of 6 or Drawing No. 3224, Rev. T, Sheet 3 of 5. Construction of the Models 3901-1 and 3901-2 shall be in accordance with either attached IPL Drawing No. 3901, Rev. -, Sheet 3 of 5 or Drawing No. 3901, Rev. G, Sheet 3 of 5.
3. Radioactive Contents - The sources described by this certificate are authorized to contain any one of the following radionuclides limited to the activity shown. The radionuclides are in the form of chlorides, nitrates, or oxides in ceramic or resin bead; oxides in gold or aluminum; or metal plated onto substrate. The Na-22 may also be in the form of NaCl in gold. The Ge-68 may also be in the form of GeO₂ in silver. The Sr-90 may also be in the form of SrTiO₄ in silver. The Ba-133 may also be in the form of BaSO₄ in ceramic.

¹ "Regulations for the Safe Transport of Radioactive Material, 2018 Edition, No. SSR-6 (Rev. 1)" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

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<u>Radionuclide</u>	<u>Activity MBq (mCi)</u>	
Na-22	185	(5)
Co-57	11,100	(300)
Co-58	11,100	(300)
Co-60	370	(10)
Ge-68	1,850	(50)
Sr-90	18,500	(500)
Ru-106	1,850	(50)
Ba-133	3,700	(100)
Cs-137	11,100	(300)
Ra-226	1,850	(50)
Lanthanides*	11,100	(300)
Actinides**	11,100	(300)

* (Isotopes of Ce, Pr, Sm, Eu, Gd, Tm, and Yb only)

** (Isotopes of Ac, Th, Pa, U, Pu, Am, and Cm only)

4. Management System Activities - Records of Management System activities required by Paragraph 306 of the IAEA regulations shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on November 30, 2030. Previous editions which have not reached their expiration date may continue to be used.

CERTIFICATE USA/0517/S, REVISION 6

This certificate is issued in accordance with paragraph(s) 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the October 10, 2025 petition by Eckert & Ziegler Isotope Products, Valencia, CA, and in consideration of other information on file in this Office.

Certified By:



William Quade
Acting Associate Administrator for
Hazardous Materials Safety

November 21, 2025
(DATE)

Revision 6 - Issued to endorse to 2018 edition of the IAEA Regulations for the Safe Transport of Radioactive Material, SSR-6 (Rev. 1), to update drawing, and to extend the expiration date.

GROUP #4

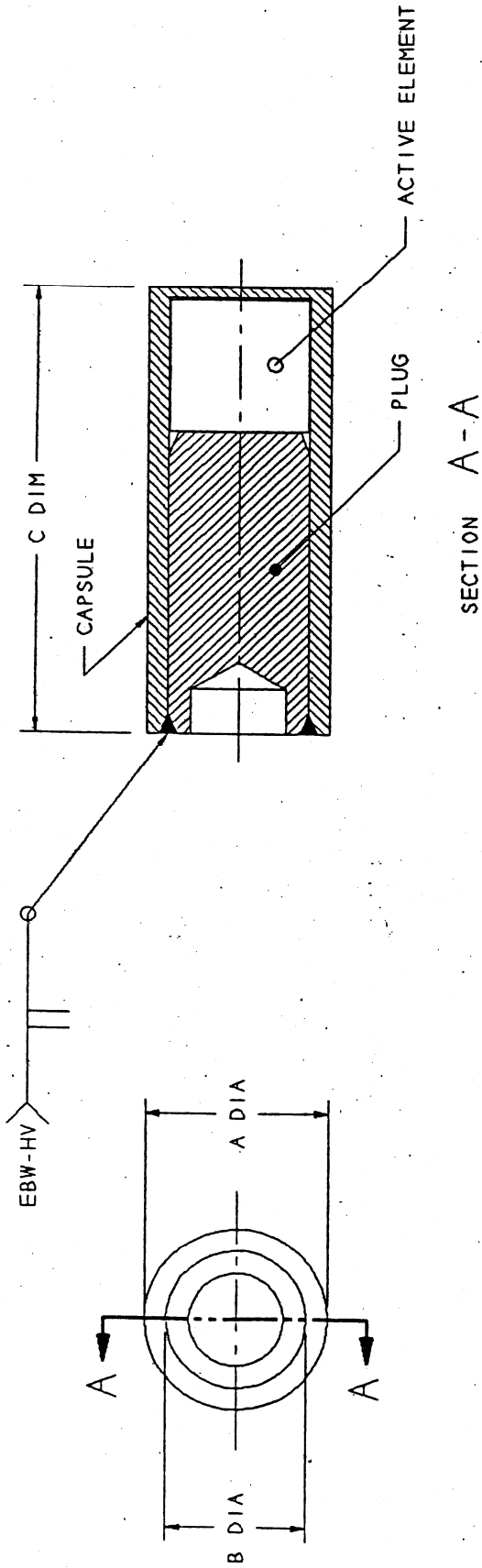


TABLE 1			
Y	A DIA	B DIA	C DIM
1	0.118	0.080	0.394
2	0.157	0.120	0.394
3	0.275	0.187	0.394
4	0.118	0.098	0.197

TABLE 2	
X	MATERIAL
0	304 or 304L STAINLESS STEEL
1	TITANIUM

P/N: A3224-XY ASSEMBLY

- INDIVIDUALLY PACKAGE AND IDENTIFY PART NUMBER THEREON
 - ENGRAVE SERIAL NUMBER -
 - CHARACTER HEIGHT 0.062 AND 0.005 MAX DEPTH
 - TOLERANCES: 0.XXX $\pm$ 0.002, 0.XX $\pm$ 0.01, 0.X $\pm$ 0.1.
ANGLE $\pm$ 0.5°
 - DIMENSIONS ARE IN INCHES
 - ASSEMBLE COMPLETE PER ENGINEERING DRAWING
AND FUSION WELD AS REQUIRED
- NOTE: UNLESS OTHERWISE SPECIFIED

THIS DRAWING IS THE PROPERTY OF ISOTOPE PRODUCTS LABORATORIES, AND MAY NOT BE USED, REPRODUCED, PUBLISHED OR DISCLOSED TO OTHERS WITHOUT EXPRESS AUTHORIZATION BY ISOTOPE PRODUCTS LABORATORIES.

 ISOTOPE PRODUCTS LABORATORIES BURBANK, CALIFORNIA 91504	
SCALE: NTS	APPROVED: <i>Michael Devine</i>
DATE: 01/11/94	DESIGNED: JMD/RLT
TITLE: INDUSTRIAL PHOTON SOURCE	REV/CHG: B
SHEET: 3 OF 6	SHEET: 3 OF 6
SERIES: GFS & XFB SOURCES	DRAWING NUMBER 3224

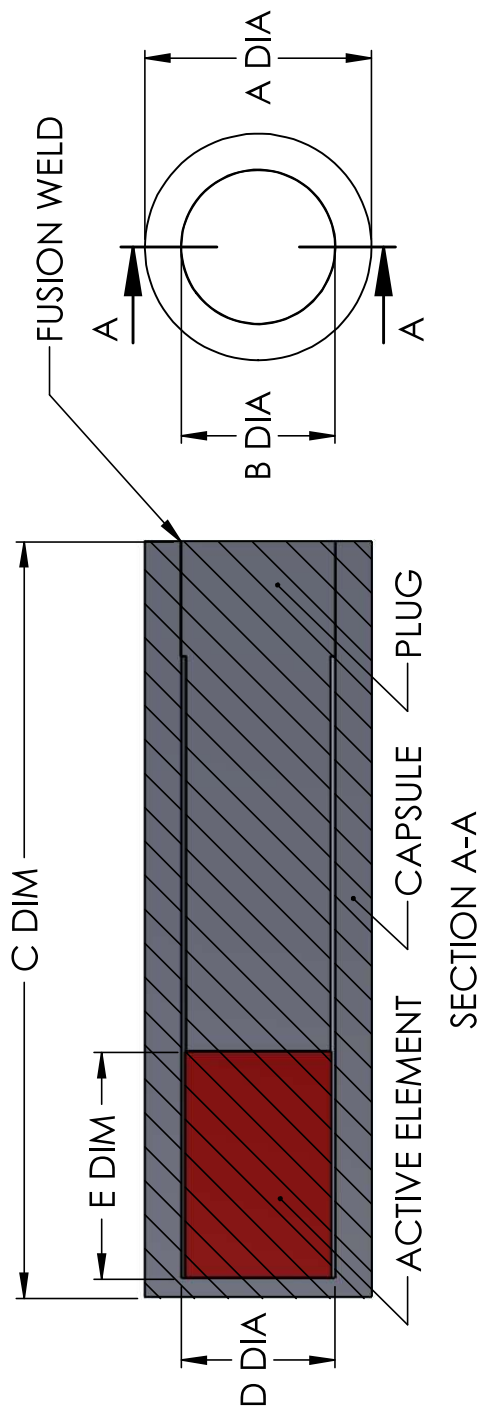


TABLE 1

X	MATERIAL
0	304 OR 304L SST
1	TITANIUM

TABLE 2

Y	A DIA	B DIA	C DIM	D DIA	E DIM
1	0.118	0.0800	0.394	0.076	0.118
2	0.157	0.1200	0.394	0.116	0.115
3	0.275	0.1870	0.394	0.182	0.160
4	0.118	0.0980	0.197	0.093	0.030
5	0.079	0.0460	0.394	0.039	0.079
6	0.079	0.0460	0.197	0.039	0.039

TABLE 3

Z	ENGRAVED CAPSULE
0	EZIP, NUCLIDE, ACTIVITY, S/N
1	EZIP, Co-57 50 μ Ci S/N
2	EZIP, Co-57 1 mCi S/N
3	EZIP, Co-57 10 mCi S/N
4	EZIP, Co-57 15 mCi S/N
5	EZIP, Co-57 20 mCi S/N
6	EZIP, Co-57 5 mCi S/N

- 3. PACKAGE AND IDENTIFY PART NUMBER THEREON
- 2. ASSEMBLE COMPLETE PER ENGINEERING DRAWING AND FUSION WELD AS REQUIRED.
- 1. MATERIAL: SEE COMPONENTS
- NOTES: UNLESS OTHERWISE SPECIFIED

P/N A3224-XYZ; ASSEMBLY



Eckert & Ziegler
Isotope Products

VALENCIA, CALIFORNIA 91355

CAGE CODE32993DRAWING SIZELETTERITUNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCH SIZES. METRIC UNITS [mm] ARE IN MILLIMETERS.

TOLERANCES (UNLESS OTHERWISE SPECIFIED)
X.XXX ± .002 INCH ANGULAR TOLERANCE OF 0°±30'
X.XX ± .005 INCH FRACTIONAL DIMENSIONS ± 1/32"
X.X ± .03 INCH REFERENCE DIMENSIONS (I N/A)
X. ± .1 INCH SURFACE ROUGHNESS (INCH MAX

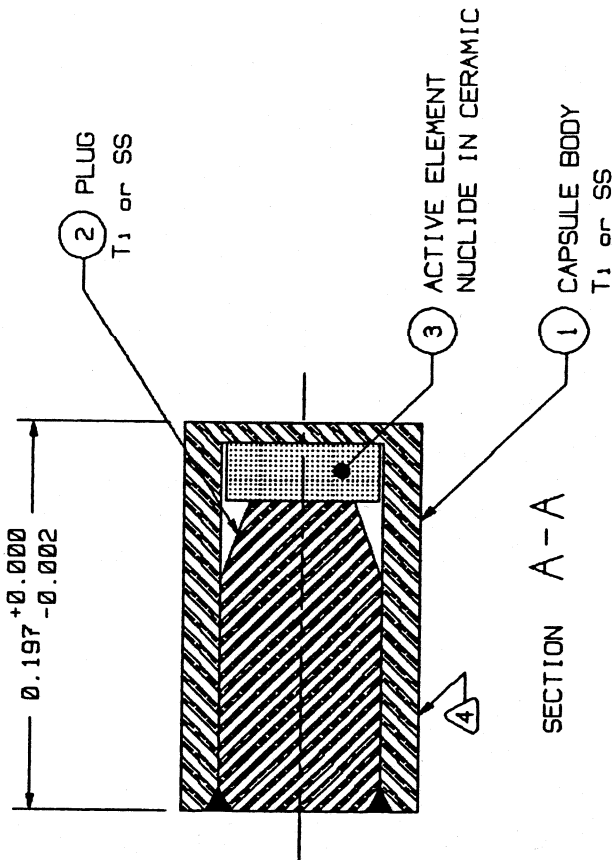
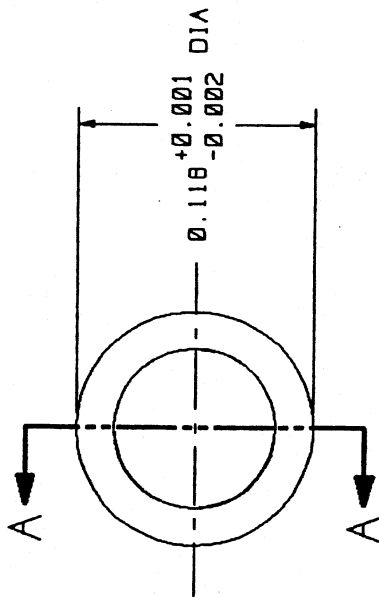
TITLEGFS INDUSTRIAL PHOTON SOURCE

SERIES TITLEINDUSTRIAL SOURCES , GFS AND XFB

DRAWING NO.3224REV T

SHEET3 OF 5

GROUP #3



P/N: A3901-X ASSEMBLY

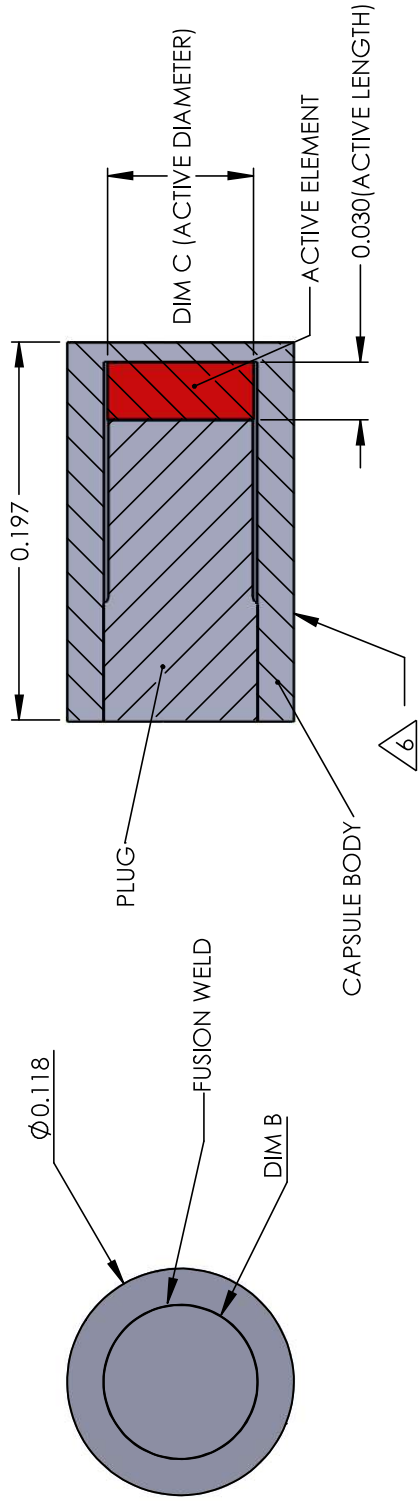
X	MATERIAL
1	TITANIUM
2	304 OR 304L SS

5. INDIVIDUALLY PACKAGE AND IDENTIFY PART NUMBER THEREON
- ④ ENGRAVE: IPL, NUCLIDE, ACTIVITY, SERIAL NUMBER
- CHARACTER HEIGHT 0.040 AND 0.003 MAX DEPTH
3. TOLERANCES: 0.XXX ±0.002, 0.XX ±0.01, 0.X ±0.1, ANGLE ±0.5°
2. DIMENSIONS ARE IN INCHES
1. ASSEMBLE COMPLETE PER ENGINEERING DRAWING AND FUSION WELD AS REQUIRED
- NOTE: UNLESS OTHERWISE SPECIFIED

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 ISOTOPE PRODUCTS LABORATORIES
BURBANK, CALIFORNIA 91504

SCALE: NTS	APPROVED:	DESIGNED: JMD/RLT
DATE: 09/15/94	<i>M. Devine</i> 12/20/94	REV/DO: -
TITLE: GAUGING SOURCE	SHEET: 3 OF 5	DRAWING NUMBER 3901
SERIES: CUSTOM SOURCES (290 SERIES)		



6 ENGRAVE CHARACTERS 0.025"-0.030" HIGH, MAX 0.003" DEEP:

EZIP
NUCLIDE
ACTIVITY
SERIAL NUMBER

5. RMD (DYNASIL) INSPECTION, IF REWELDED:
MAX LENGTH 0.196 +/- 0.005, MAX DIA. 0.118+0.000-0.002
 4. PACKAGE AND IDENTIFY PART NUMBER THEREON
 3. SURFACE ROUGHNESS: 32 μ in RMS
 2. REMOVE BURRS AND BREAK EDGES 0.005 MAX
 1. MATERIAL: TITANIUM OR STAINLESS STEEL (304/304L)
- NOTES: UNLESS OTHERWISE SPECIFIED

X	MATERIAL	DIM B	DIM C
1	TITANIUM	0.0800	0.076
2	304 OR 304L STAINLESS STEEL	0.0980	0.093

P/N: A3901-X ASSEMBLY

 Eckert & Ziegler Isotope Products VALENCIA, CALIFORNIA 91355	CAGE CODE 32993		DRAWING SIZE LETTER		DRAWN KM		TITLE	
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCH SIZES. METRIC UNITS [mm] ARE IN MILLIMETERS.		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCH SIZES. METRIC UNITS [mm] ARE IN MILLIMETERS.		ME/CHECKER JR		GAUGING SOURCE	
	TOLERANCES (UNLESS OTHERWISE SPECIFIED) X.XXX ± .002 INCH ANGULAR TOLERANCE OF 0°±30° X.XX ± .005 INCH FRACTIONAL DIMENSIONS ± 1/32° X.X ± .03 INCH REFERENCE DIMENSIONS (I N/A) X. ± .1 INCH SURFACE ROUGHNESS (INCH MAX		ENGINEER EZ		SCALE 10:1		SERIES TITLE	
	INDUSTRIAL SOURCES, CUSTOM		DRAWING NO. 3901		REV G		SHEET 3 OF 5	



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East Building, PHH-23
1200 New Jersey Ave, SE
Washington, D.C. 20590

CERTIFICATE NUMBER: USA/0517/S-96

ORIGINAL REGISTRANT(S) :

Eckert & Ziegler Isotope Products
24937 Avenue Tibbitts
Valencia, CA, 91355
USA