



Certificate

CDN/0004/S-96 (Rev. 13)

Special Form

The special form radioactive material identified below is certified by the Canadian Nuclear Safety Commission pursuant to paragraph 21(1)(h) of the *Nuclear Safety and Control Act* and Subsection 10(1) of the *Packaging and Transport of Nuclear Substances Regulations, 2015* and to the IAEA's *Regulations for the Safe Transport of Radioactive Material, 2012 Edition*.

CAPSULE IDENTIFICATION

Designer: **Best Theratronics Ltd.**

Make/Model: **C-146, C-151 and, XC-325 Teletherapy Source Capsules**

CAPSULE DESCRIPTION

The C-146 Teletherapy Source Capsule (Types 0.50 to 3.0), as shown on Best Theratronics Drawing No. A03038, (Issue S), consists of a doubly encapsulated, stainless steel welded capsule assembly with dimensions 8.5 mm to 32.9 mm diameter (dependent on type) by 36.7 mm long.

An illustration of the C-146 capsule is shown on attached Drawing No. C-146, (Rev. 23).

The configuration of the C-146 capsule is as follows:

Shape:	Cylinder	Shielding:	n/a
Mass:	n/a	Outer Casing:	Stainless Steel
Length:	n/a	Height:	36.7 mm
Width:	n/a	Diameter:	32.9 mm

The C-151 Teletherapy Source Capsule (Types 1.0 to 3.0), as shown on Best Theratronics Drawing No. A03049, (Issue S), consists of a doubly encapsulated, stainless steel welded capsule assembly with dimensions 13.5 mm to 32.9 mm diameter (dependent on type) by 36.7 mm long.

An illustration of the C-151 capsule is shown on attached Drawing No. C-151 (Rev. 26).





The configuration of the C-151 capsule is as follows:

Shape:	Cylinder	Shielding:	n/a
Mass:	n/a	Outer Casing:	Stainless Steel
Length:	n/a	Height:	36.7 mm
Width:	n/a	Diameter:	32.9 mm

The XC-325 Teletherapy Source Capsule, as shown on Best Theratronics Drawing No. G132520-101, (Issue T), consists of a doubly encapsulated, stainless steel capsule assembly with dimensions 23.4 mm diameter by 36.7 mm long.

An illustration of the XC-325 capsule is shown on attached Drawing No. XC-325, (Rev. 11).

The configuration of the XC-325 capsule is as follows:

Shape:	Cylinder	Shielding:	n/a
Mass:	n/a	Outer Casing:	Stainless Steel
Length:	n/a	Height:	36.7 mm
Width:	n/a	Diameter:	23.4 mm

AUTHORIZED RADIOACTIVE CONTENTS

The capsules are authorized to contain not more than the following limits of cobalt-60 metal:

- a) C-146 and C-151: 560 TBq; or
- b) XC-325: 450 TBq.

MANAGEMENT SYSTEM

The management system for the design, manufacture, testing, documentation, use, maintenance and inspection of the capsule shall be in accordance with:

- Best Theratronics Document No. 5.05-QA-02 (2)*, "Sealed Source Quality Plan"
- Packaging and Transport of Nuclear Substances Regulations, 2015
- * or latest current revision

I. Tremblay
Designated Officer pursuant to paragraph 37(2)(a)
of the Nuclear Safety and Control Act



Canada's Nuclear Regulator
L'organisme de réglementation
nucléaire du Canada

NOTES

Revision 11: August 13, 2014. Certificate renewed.

Revision 12: September 11, 2018. Certificate renewed.

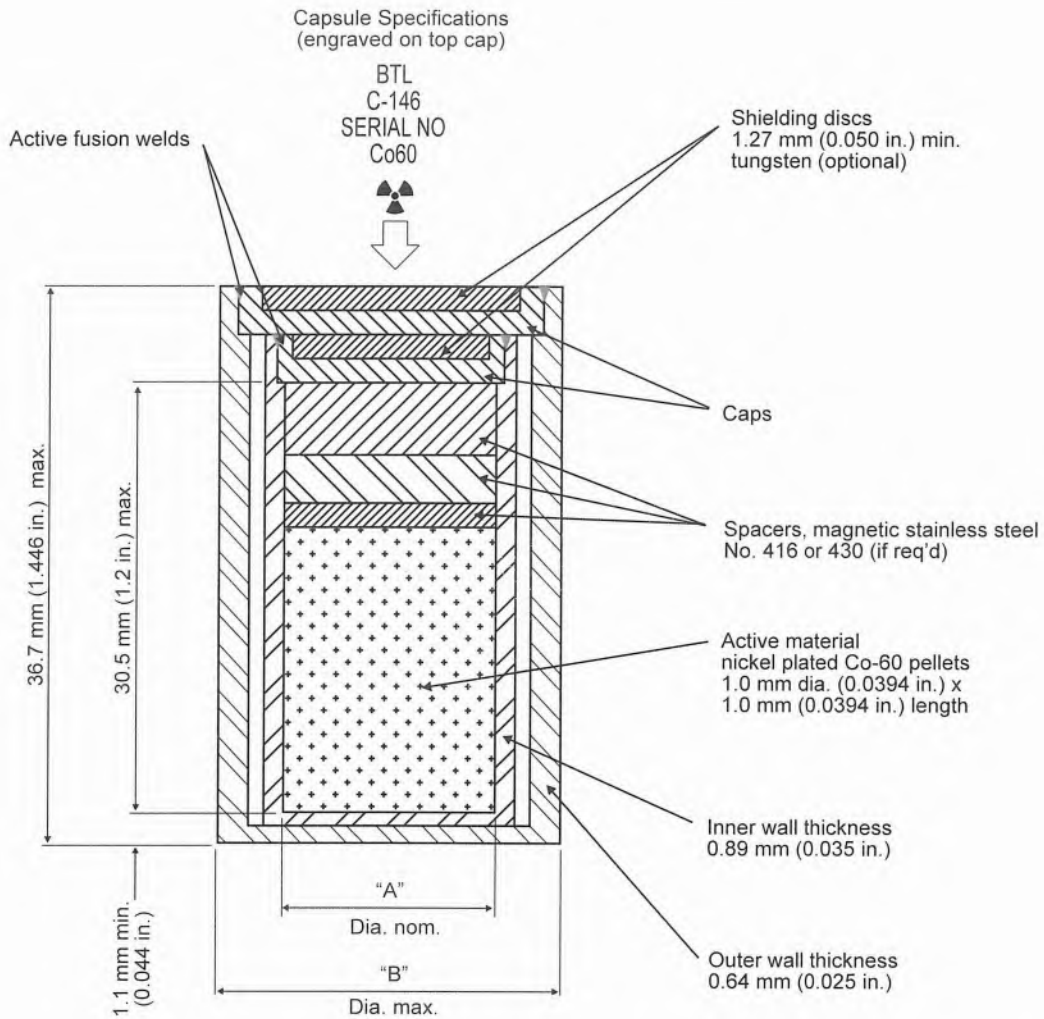
Revision 13: September 21, 2023. Certificate renewed.



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada



Notes:

1. Capsule material No. 316L stainless steel unless otherwise specified.
2. Dimensions shown are at 20°C (68°F).
3. Nominal packing density of radioactive pellets 5.78 g/cm³.

Type	"A" dia. (source) nominal		"B" dia. O.D. max.	
	(cm)	(in.)	(cm)	(in.)
0.50	0.50	0.197	0.85	0.334
0.75	0.75	0.295	1.09	0.432
1.0	1.0	0.394	1.35	0.531
1.25	1.25	0.492	1.60	0.629
1.50	1.50	0.590	1.83	0.722
1.75	1.75	0.689	2.06	0.811
2.0	2.0	0.787	2.34	0.922
2.25	2.25	0.886	2.56	1.008
2.50	2.50	0.984	2.81	1.106
3.0	3.0	1.181	3.29	1.296

AUG 21 2018

Best[®]
Theratronics

413 March Road
Ottawa, Ontario
Canada, K2K 0E4
Tel: (613) 591-2100

TITLE

C-146 Teletherapy Source Capsule

REF. IN/SS 6014 C146
A03038

REVISED Aug 18 DC 31403

DATE Jun 4, 1992

No.

C-146

ISSUE

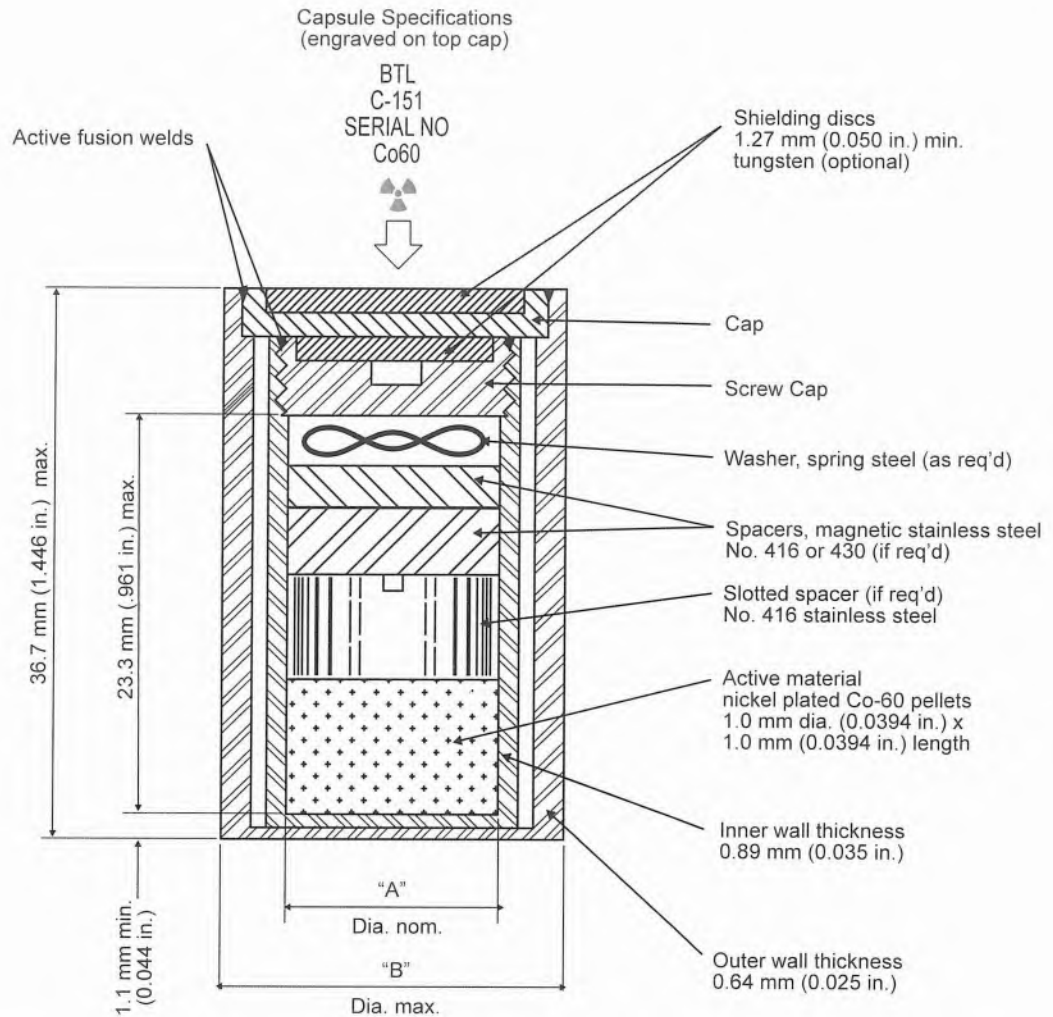
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BW VE AC

SHEET 1 OF 1

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Notes:

1. Capsule material No. 316L stainless steel unless otherwise specified.
2. Dimensions shown are at 20°C (68°F).
3. Nominal packing density of radioactive pellets:
5.34 g/cm³ when pellet height below 0.7 cm.
5.78 g/cm³ when pellet height 0.7 cm and above.

Type	"A" dia. (source) nominal		"B" dia. O.D. max.	
	(cm)	(in.)	(cm)	(in.)
1.0	1.0	0.394	1.35	0.531
1.25	1.25	0.492	1.60	0.629
1.50	1.50	0.590	1.83	0.722
1.75	1.75	0.689	2.06	0.811
2.0	2.0	0.787	2.34	0.922
2.25	2.25	0.886	2.56	1.008
2.50	2.50	0.984	2.81	1.106
3.0	3.0	1.181	3.29	1.296

AUG 21 2018

**Best[®]
Theratronics**

413 March Road
Ottawa, Ontario
Canada, K2K 0E4
Tel: (613) 591-2100

TITLE

C-151 Teletherapy Source Capsule

REF. IN/SS 6015 C151
A03049

REVISED Aug 18

DC 31403

DATE Jun 4, 1992

No.

C-151

ISSUE

26

DRAWN CHECKED APPROVED

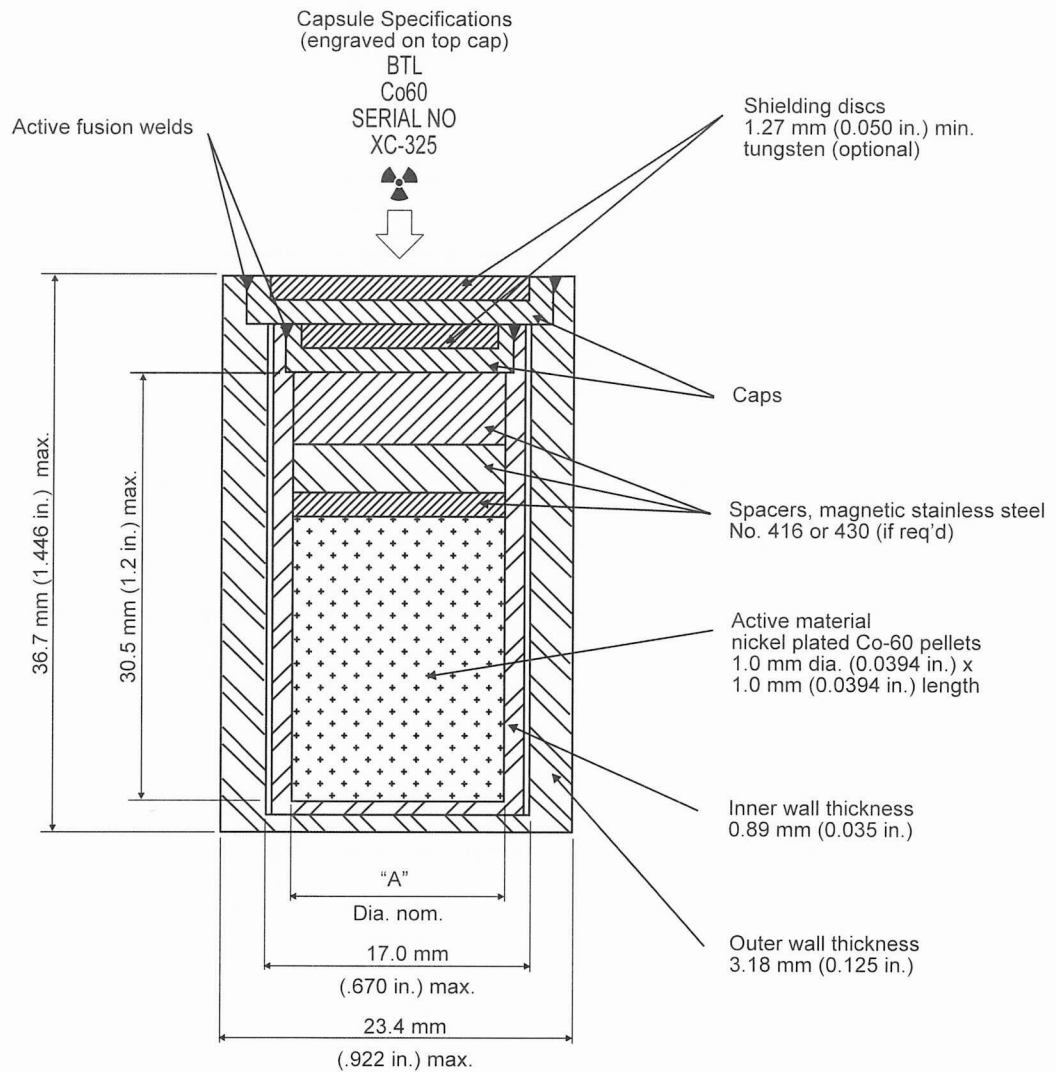
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SEP 06 2018

Notes:

1. Capsule material No. 316L stainless steel unless otherwise specified.
2. Dimensions shown are at 20°C (68°F).
3. Nominal packing density of radioactive pellets: 5.78 g/cm³.
4. "A" dia. (source) nominal shown for 1.5 type capsule only.
For other capsule types refer to dwg. G132520-101.

Type	"A" dia. (source) nominal	
	(cm)	(in.)
1.50	1.5	0.590

Best[®]
Theratronics

413 March Road
Ottawa, Ontario
Canada, K2K 0E4
Tel: (613) 591-2100

TITLE

Teletherapy O.E.M. Source Capsule

REF. IN/SS 6013 XC325
G132520-101

REVISED Sept. 18 DC 31408

DATE Jun 4, 1992

No. **XC-325**

ISSUE

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