

ISOTOPE GENERATOR LIFT and TRANSPORT CART (IG-LTC)



Product Manual



ALARA USA
Built for Safety and Trusted to Protect



Please read manual prior to first use. Use **ONLY** as intended, Use at your own risk.



This unit has several points where pinches can occur. Use caution!



Please use caution when lifting heavy objects.



This unit has several points that can cause crush or cut injuries. Use Caution!

I. Introductions

ALARA USA is proud to introduce the *Isotope Generator Lift and Transport Cart (IG-LTC)* — a new and innovative solution for shielded isotope generator transport within a facility. Designed with safety and efficiency in mind, the IG-LTC features an easy-to-store, detachable hand-crank lifting system that eliminates the need for manual lifting of heavy generators, significantly reducing the risk of injury from improper handling or repetitive strain. At ALARA USA, we understand the challenges of working with isotope generators. That's why the IG-LTC has been engineered to meet the highest standards of radiation safety, ergonomic design, and cleanroom compatibility.

Traditional transport carts often lack adequate shielding and require manual lifting of generators from shipping containers to carts, and then into storage silos — increasing both injury risk and radiation exposure. The IG-LTC solves these issues through its patented self-contained 1" lead design, double-lid handles for safe lifting, and built-in resting positions for lids during generator loading and unloading. The detachable hand-crank system further enhances safety by removing the need for heavy lifting during generator replacement or cleaning. Additionally, integrated shielding reduces exposure during maintenance of *Isotope Generator Station (IGS)* wells (sold separately). Compact and mobile, the IG-LTC is ideal for environments where space is limited. Combining safety, mobility, and functionality, it represents the next evolution in isotope generator handling and transport.

II. Product Features

- * 304 and 316 Stainless Steel Construction
- * Shed and Maintenance Free Bearings
- * Zero Lead Exposure
- * High Chemical Resistivity
- * Space Saving Compact Designs
- * Mobile
- * Maintenance Free Casters

III. Assembly and Operation

Safety Notes

- Always follow facility-specific radiation safety protocols and ALARA principles.
- Keep hands clear of pinch points when operating or assembling the lifting system.
- Do not exceed the rated load capacity of the IG-LTC or lifting mechanism.
- Ensure caster brakes are engaged when stationary.

The Isotope Generator Lift and Transport Cart (IG-LTC) is designed for use with the Isotope Generator Station (IGS) (sold separately). The IG-LTC features a patented hand-crank lifting system that reduces the risk of lifting-related injuries by eliminating the need for manual handling of heavy isotope generators. During setup, use proper lifting techniques when removing the heavy lids for initial cleaning. Exercise caution to prevent pinch or crush injuries when assembling or disassembling the hand-crank system.

Assembly and Operation Procedure

1. Preparation and Cleaning

- Clean and sanitize the IG-LTC in accordance with facility policies and regulatory requirements.
- Verify that all components are present and in good working condition.

2. Assembly of the Lifting System

- Attach the **mast** to the base.
- Attach the **boom** to the mast and secure it with the **set pin**.
- Slide the **hand crank** onto the boom and set the **retainer clip** at the end of the boom.

3. Generator Loading Procedure

- Remove the **lid** from the IG-LTC well and rest it securely on the adjacent lid support.
- Create cable slack by rotating the hand crank counterclockwise.
- Clip the **lifting cable** securely to the isotope generator handle.
- With a steady and controlled motion, **raise the generator** until it clears the top of the IG-LTC.

4. Transport and Positioning

- Slowly slide the isotope generator along the boom until it is positioned directly above the destination well opening.
- Carefully **lower the generator** into the well using the hand crank until it is fully seated and the cable becomes slack.
- **Unclip the cable**, then reverse the hand-crank direction to retract the cable back onto the spool.

5. Post-Transfer Procedure

- Replace the **lid** over the well to maintain shielding and minimize radiation exposure.
- Transport the IG-LTC to the cleanroom as required.

6. Cleanroom Transfer

- Follow the same procedure when transferring a generator to a cleanroom IG-LTC.
 - Ensure the isotope generator is properly sanitized before lowering it into the cleanroom IG-LTC.
 - Once transfer is complete, cover the cleanroom IG-LTC well opening with the appropriate lid.

7. Elution Generator Loading and Unloading

- Always follow facility-approved procedures when loading or unloading elution generators into the *Isotope Generator Station (IGS)* or associated storage silos.

IV. Maintenance

All components and materials used in the construction of the IG-LTC have been carefully selected and tested for compatibility with cleanroom environments. From the casters to the rail system, you can be confident that the IG-LTC meets or exceeds industry standards for safety, cleanliness, and durability.

With proper use, routine cleaning, and standard maintenance practices, the IG-LTC is designed to remain **maintenance-free throughout its service life**. Regular inspection of the casters, lifting components, and hand-crank assembly is recommended to ensure smooth operation and continued reliability.

V. Product Specifications

Unit Specifications		Unit Specifications	
Part	Material	Part	Measurement
Frame	316 Stainless Steel	Height	30"
Outer housing	316 Stainless Steel	Width	16.5"
Casters frame	304 Stainless steel	Length	24"
Caster Wheel	Polyurethane	Caster Height	6"
Bearing Shafts	316 Stainless Steel	Unit Weight Unloaded	~461 lbs.
Bearing Shaft Support Stands	Anodized Aluminum	Max Weight Capacity	2400 lbs.
Bearing Sleeves	Anodized Aluminum	Load Rating	500 lbs.
Bolts	316 Stainless Steel	Chemical Resistivity	High
Shielding Type	99.9% Certified (Pb)	Shield Thickness	1"

VI. Warranty and Legal Information

This product is covered by a Lifetime warranty starting from the purchase date. Warranty claims should be submitted to ALARA USA at the following address: www.alarusa.com.

Warranty Coverage	Details
Parts and Labor	Lifetime from the purchase date.
Damages from misuse and accidents	Not Covered Under Warranty
Return Process	Contact ALARA USA.

Thank you for your purchase! We hope you love your new product and are happy to assist you with any questions. We appreciate your business and look forward to serving you again!