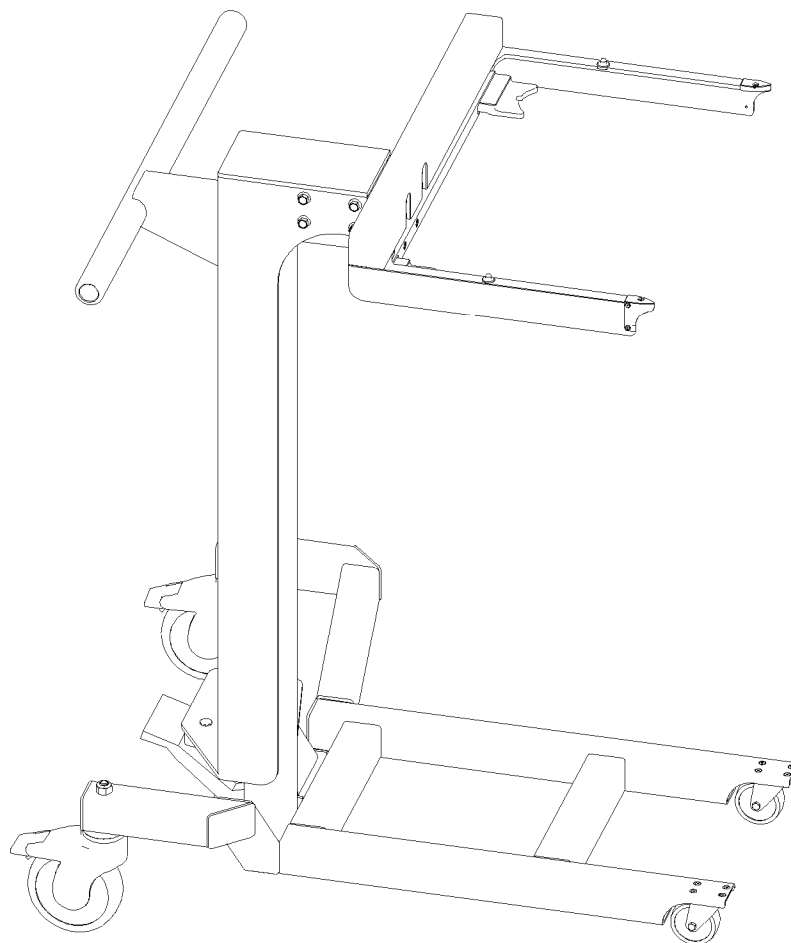


L1 Cassette Cart Product Manual



**Carbon, Inc.
1089 Mills Way
Redwood City, CA 94063**

Introduction

Intended Use

The intended use of the Carbon L1 Cassette Cart is to load and remove the cassette from the Carbon L1 Printer only.

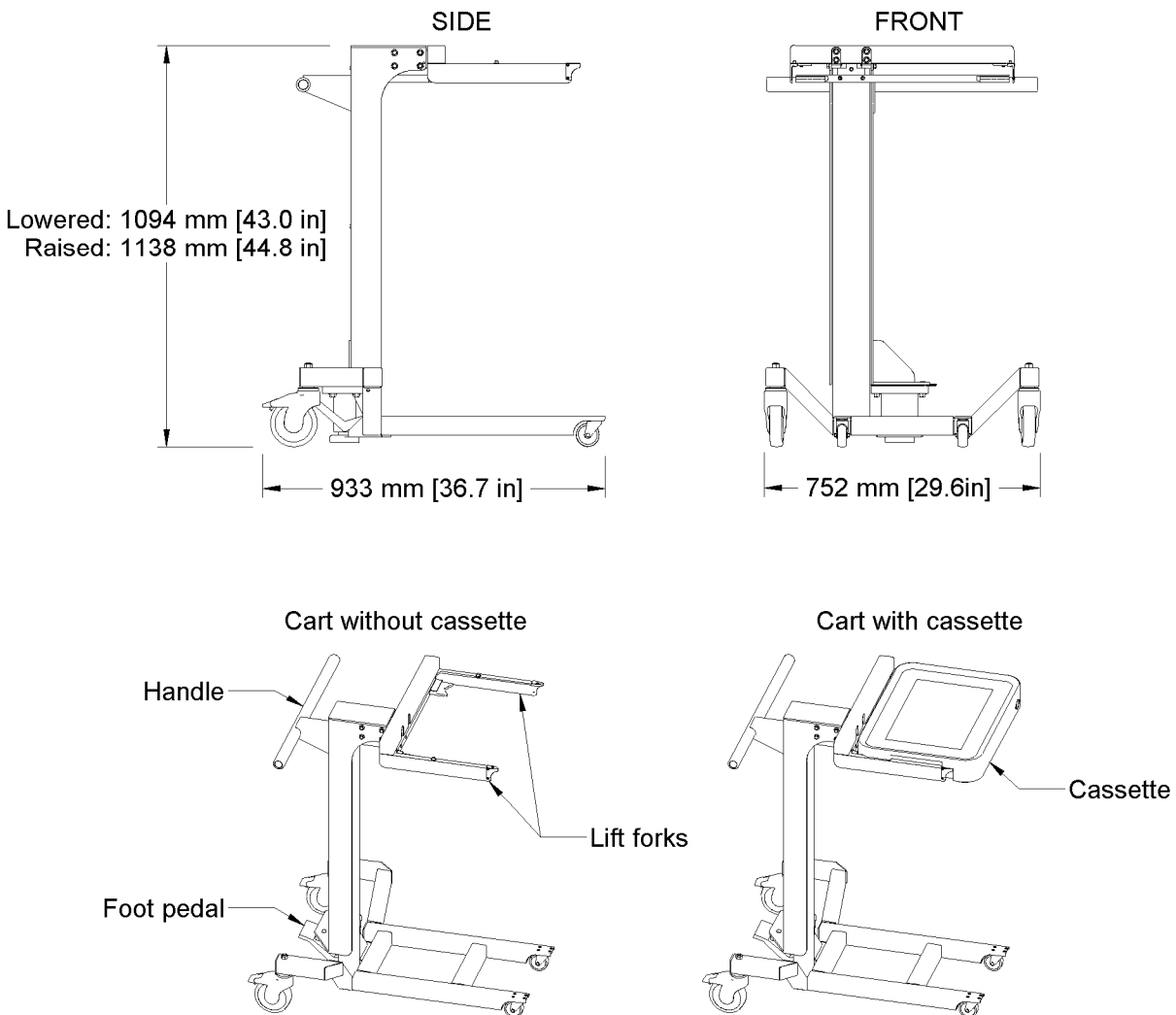
Signal Words and Symbols

The following types of warnings alert you to specific hazards:

	DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	NOTICE is used to address practices not related to physical injury.
	SAFETY INSTRUCTIONS indicate specific safety-related instructions or procedures.

Overview

The cassette cart is a Carbon accessory designed to safely transport and install the cassette on the L1 printer. It uses a mechanical foot pedal to lift or lower the cassette into position. The cart weighs 62 kg (137 lbs) and is designed to lift 25 kg (55 lbs), but can safely lift a maximum of 32 kg (70.5 lbs). It is 752 mm (W), 933 mm (D), 1094 mm (H) lowered (29.6 in x 36.7 in x 43.0 in) and 1138 mm (44.8 in) raised. The cart is only designed for use with Carbon L1 Printer cassettes and should not be used for any other purpose. Carbon will install and service the cart.



Warnings and Safety Information

⚠ WARNING	• FAILURE TO FOLLOW THESE WARNINGS AND INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH. • This machine to be operated ONLY by trained personnel in accordance with the Operator's Manual, safety procedures, and instructions for safe machine operation. Failure to comply with these specified procedures and instructions may impair the safety features of the machine. • Read all safety instructions before use. • DO NOT exceed the rated load of 32 kg (70.5 lbs). • DO NOT modify or service the cassette cart. For all service and maintenance, contact Carbon. • The cassette cart should only be used as directed with the Carbon L1 Printer cassette. • NEVER attempt to use the cassette cart to lift or transport more than one (1) cassette at a time. • NEVER put your head or torso under a lifted cassette. • AVOID putting your hand below the cassette unless needed for inspection or maintenance. • ALWAYS verify that the cassette is seated securely on lift fork nubs.
⚠ CAUTION	• When the cart is loaded with a cassette, the cassette may impair visibility. Proceed with caution when pushing the cart. • Proper PPE is ALWAYS required when printing or interacting with resin (nitrile gloves, lab coat, safety glasses, long pants, closed-toe shoes). • Clean up resin spills (including drips) immediately to avoid slippery floors and prevent spreading of resin contamination. • When lifting the cassette by hand, use two people and lift using the handles on the sides of the cassette. • Lock cart casters when the cart is unattended. • Monitor the cart and load during all movements. • Using the cassette cart to move a cassette that contains resin increases the risk of spills. Ensure the cassette is fully seated on the cassette cart, and use caution when handling the cassette cart.

⚠CAUTION 	• PINCH HAZARD: Internal moving parts can cause severe injury. Watch out for pinch points and bump hazards. Only move the cassette cart using the cart's handle.
NOTICE	• The cassette cart should only be operated on a flat, smooth floor such as troweled concrete or epoxy.

Instructions for Use

See the L1 Operator's Manual for detailed instructions for operating the L1 Printer and its accessories.

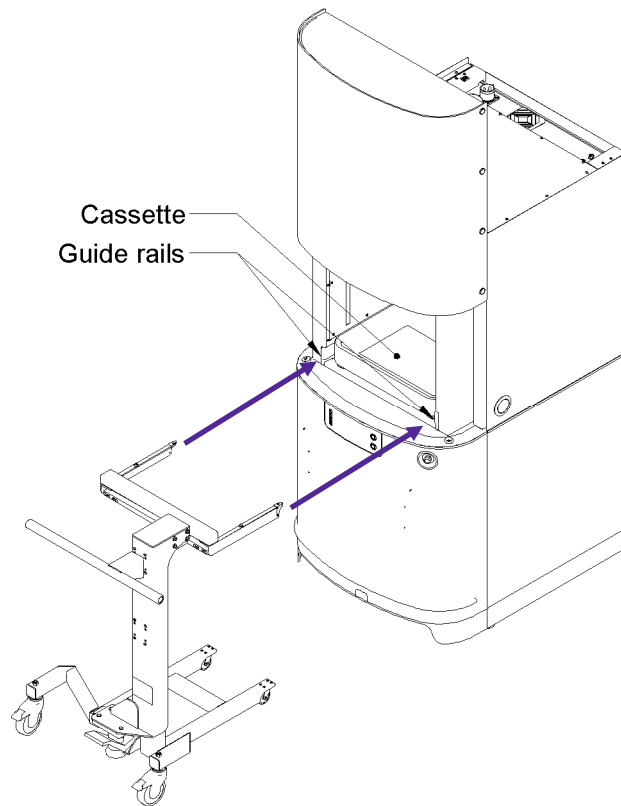
Raising and lowering the lift forks:

- 1) Press the foot pedal fully to raise the lift forks of the cassette cart.
- 2) Press the small foot pedal release to the right of the pedal to lower the lift forks of the cassette cart.

SAFETY INSTRUCTIONS	If the lift mechanism becomes stuck or inoperable with a cassette on the cart, remove the cassette as follows: 1) If possible, lower the cassette using the foot pedal release. 2) Remove any resin and clean the cassette per the instructions in the L1 Operator's Manual. 3) Using two people, one holding the handle on each side of the cassette, carefully lift and slide the cassette off the lift forks.
CAUTION	PINCH HAZARD: Keep both hands on the cart handle when raising and lowering the lift forks. Keep hands away from the bar under the lift forks.

Using the cassette cart to remove a cassette from the Carbon L1 printer:

- 1) Using an empty cart in the lowered position, line up the cart's lift forks with the printer's guide rails.



- 2) Push the cart straight into the machine using the cart's handle. Continue pushing until the cart hits a hard stop.
- 3) Raise the cassette using the foot pedal.
- 4) Verify that the cassette is seated securely on the cart's lift forks.

**SAFETY
INSTRUCTIONS**

If the cassette is not seated securely, do not attempt to adjust it by hand. Instead, lower the lift forks using the foot pedal release, make sure the cart is properly aligned and pushed fully into the printer, and lift the cassette again using the foot pedal.

- 5) Slowly pull the cart straight back using the cart's handle to remove the cassette from the printer.

Using the cassette cart to load a cassette into the Carbon L1 Printer:

- 1) Once the printer display reads “Install Cassette,” open the printer door.
- 2) With the cart holding a cassette in the raised position, line up the cart’s lift forks with the printer’s guide rails. Slowly push the cart straight into the machine using the cart’s handle until the cart contacts a hard stop.
- 3) Once fully inserted, lower the cassette into place using the foot pedal release. If properly seated, the printer’s cassette indicator light will illuminate.

SAFETY INSTRUCTIONS	If the cassette is not seated securely, do not attempt to adjust it by hand. Instead, raise the lift forks using the foot pedal, make sure the cart is properly aligned and pushed fully into the printer, and lower the cassette again using the foot pedal release.
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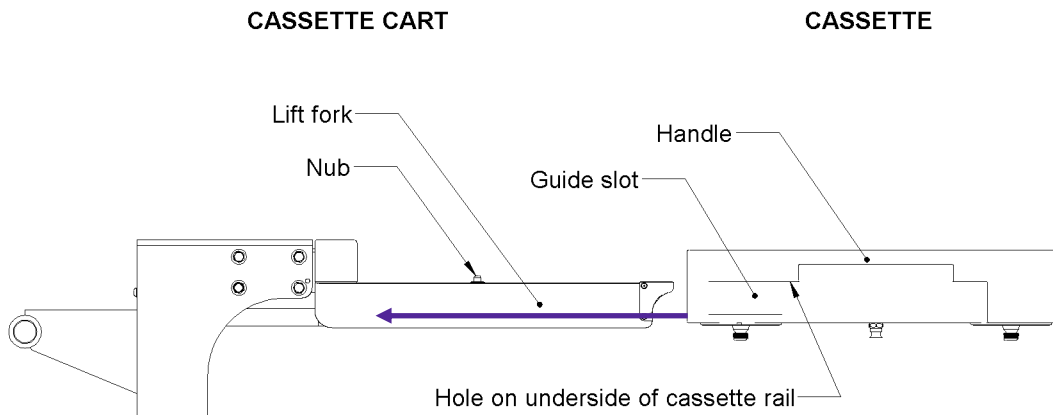
- 4) Slowly pull the cart straight back using the cart’s handle to remove the cart from the printer.

Loading and removing a cassette from the cassette cart:

SAFETY INSTRUCTIONS	When lifting the cassette by hand, use two people and lift using the handles on the sides of the cassette. Only load or remove a cassette with the cassette cart in the lowered position.
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Loading a cassette -

- 1) Lower the lift forks using the foot pedal release if necessary.
- 2) With one person holding the handle on each side of the cassette, slide the guide slots on the sides of the cassette onto the lift forks. Carefully lower the cassette, seating the nubs on top of the lift forks into the holes on the underside of the cassette rails.



- 3) Verify that the cassette is fully seated on the lift forks.

Removing a cassette -

- 1) Lower the lift forks using the foot pedal release if necessary.
- 2) With one person holding the handle on each side of the cassette, carefully lift the cassette off the nubs on the lift forks and slide the cassette off.

Cleaning

Wipe the exterior surfaces of the cassette cart as necessary.

Installation & Maintenance

Carbon Service is responsible for all cassette cart installation and maintenance at this time.

The cassette cart requires no routine user maintenance.

Support

Contact Carbon Support (support@carbon3d.com) or call 1 (650) 285-6307, option #2.

Troubleshooting -

Carbon Support will advise on specific troubleshooting measures.

Regulatory Information

Appendix A: L1 Cassette Cart Label

Appendix B: Declaration of Conformity

Appendix A: L1 Cassette Cart Label

Doc # 110412-04 Rev. A

Carbon

MODEL	104894
WEIGHT	62KG (137lb)
YEAR OF CONSTRUCTION	
INPUT	MANUAL EFFORT
RATED LOAD	32KG (70.5LB)
MAIN DOCUMENT	PRODUCT MANUAL



COUNTRY OF ORIGIN: USA
Carbon, Inc.
1089 Mills Way
Redwood City, CA 94063 USA



Carbon

Declaration of Conformity

11 JANUARY 2024

L1 CASSETTE CART

The manufacturer of the products covered by this declaration is

Carbon

Authorized Representative:

Carbon Technologies DE GmbH

Dornhofstrasse 38a,

63263 Neu-Isenburg Germany

E-mail: productstewardship@carbon3d.com

Attention: Michael Brielmann

The directives covered by this declaration

2006/42/EC – Machinery (consolidated edition)

The products covered by this declaration

Carbon, Inc. L1 Cassette Cart



The basis on which conformity is being declared

The product identified above comply with the listed directives and the manufacturer has created the Technical File.

The manufacturer has applied the following standards:

EN 1494:2000 + A1:2008 (Mobile or movable jacks and associated lifting equipment)

EN 12100:2011 (Safety Guidelines for Risk Assessment)

The technical documentation required to demonstrate the products meet the requirements of the listed directives has been compiled and is available for inspection by the relevant enforcement authorities.

Signed: 
Chris Van Wert

Date: 11 January 2024

Authority: VP, Operations
Title

Attention!

The attention of the specifier, purchaser, installer, or user is drawn to special measures and limitations to use that must be observed when these products are taken into service to maintain compliance with the above directives. Details of these special measures and limitations to use are available on request and are also contained in the product manuals.

UKCA Declaration of Conformity

11 JANUARY 2024

L1 CASSETTE CART

The manufacturer of the products covered by this declaration is

Carbon®

Authorized Representative:

Carbon Technologies UKGBNI Limited

12 New Fetter Lane, London, EC4A 1JP, UK

E-mail: productstewardship@carbon3d.com

The Legislation/ Directives covered by this declaration

- Supply of Machinery (Safety) Regulations 2008

The products covered by this declaration

Carbon, Inc. L1 Cassette Cart



The basis on which conformity is being declared

The product identified above comply with the listed directives and the manufacturer has created the Technical File.

The manufacturer has applied the following standards:

EN 1494:2000 + A1:2008 (Mobile or movable jacks and associated lifting equipment)

EN 12100:2011 (Safety of Machinery – Risk Assessment and Risk Reduction)

The technical documentation required to demonstrate the products meet the requirements of the listed directives has been compiled and is available for inspection by the relevant enforcement authorities.

Signed: 
Chris Van Wert

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