



Owner's manual

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67RA550001-MAN-EN

CDL Wood Chip Feeder



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Introduction

Thank you for choosing the CDL wood chip feeder screw for your evaporator. At CDL, we take pride in offering you quality equipment designed to meet the demands of the maple syrup industry.

This user manual has been carefully prepared to provide you with the necessary information to optimize the use of your wood chip feeder screw. We hope it will serve as a valuable resource to guide you throughout your production process.

We appreciate your trust in CDL and are confident that our equipment will contribute to the success of your business. Please do not hesitate to contact us if you have any questions or need support. Once again, thank you for choosing CDL for your maple syrup equipment needs.

Safety Instructions

Safety is a top priority when installing and using your equipment. This section provides essential information to ensure safe operation.

Please carefully read all safety instructions before starting any operation. The following pictograms are used in this manual to draw your attention to specific hazards and precautions. Understanding and following these instructions will help prevent accidents and ensure a safe working environment.

General Hazard



This symbol indicates a potential risk of serious injury or material damage. Please take all necessary precautions to avoid accidents.

Electrical Hazard



This symbol warns of a risk of electric shock, which can result in serious injury or death. Ensure the power supply is disconnected before performing any intervention and follow electrical safety instructions.

Crushing Hazard



This symbol indicates a potential crushing hazard that could lead to serious injury. Be cautious in areas where moving or heavy parts may shift.

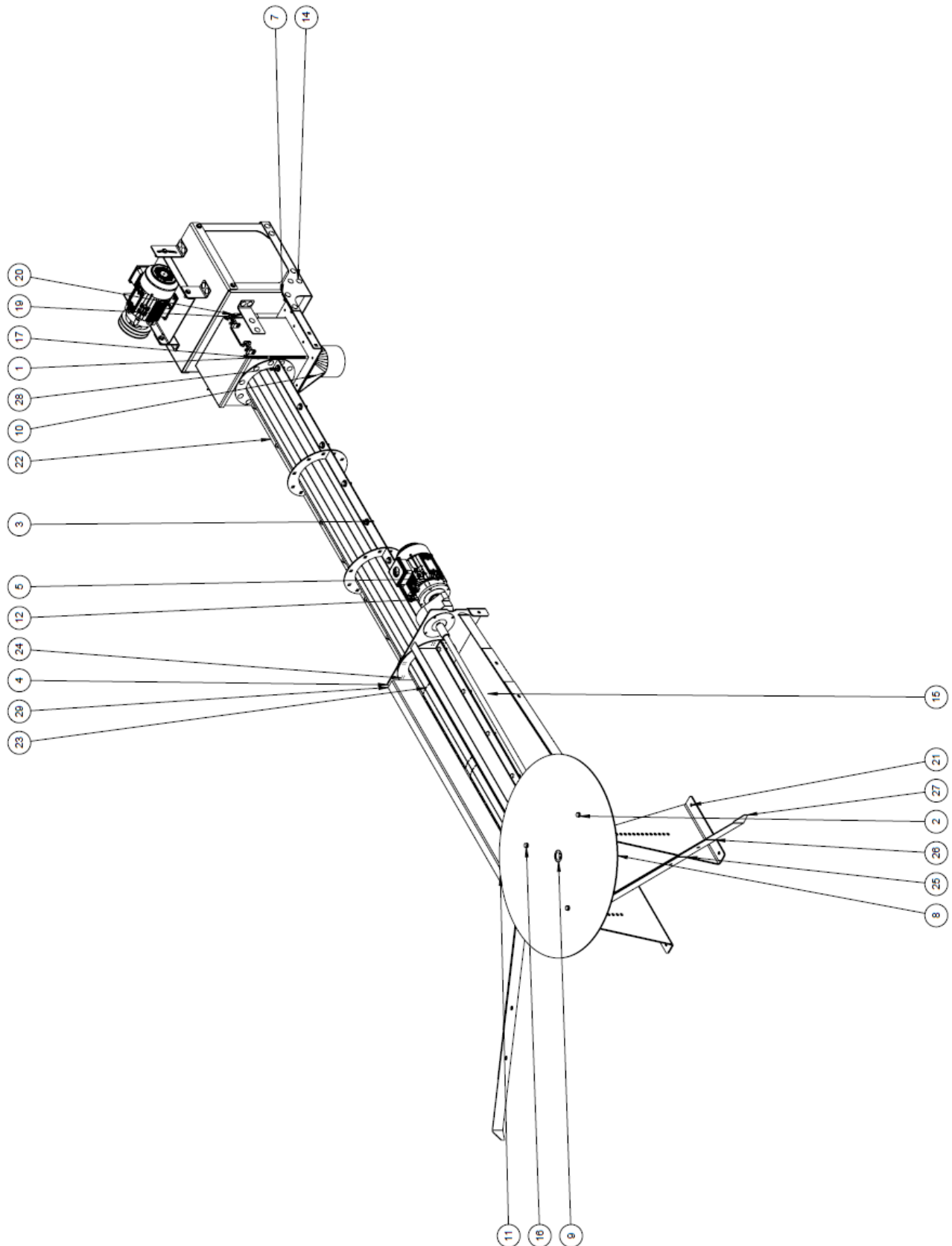
Burn Hazard



This symbol warns of a potential burn risk that could result in serious injury. Pay attention to hot surfaces and high-temperature liquids. Use protective equipment to prevent burns.

Components

List of Components			
#	Stock Code	Qty	Description
1	724500104	30	CARRIAGE BOLTS 1/2-13 X 1-1/2" SS
2	RLOI-T0500	33	LOCK WASHER (SS) DIA 1/2"
3	667413B	58	HEX. NYLON LOCKNUT (GR5-ZINC) 1/2-13 NC
4	FRAPC-P00394	1	SHEET METAL
5	668021	1	MOTOR 2HP 145TC 208/460V 1750RPM
6	FRAPC-P00359	1	SHEET METAL
7	FRAPC-A00143	1	ASM HEAD ADAPTOR WOOD CHIP
8	1300014	1	SPEED REDUCER CC100-60L143
9	FRAPC-A00144	1	ASM WOOD CHIP ARM AGITATOR
10	FRAPC-A00145	1	WOOD CHIP ADAPTOR OUTLET
11	FRAPC-P00373	1	SHEET METAL
12	667755	1	GEAR REDUCER 5:1 RHP-2.875 145TC
13	130009	2	FLANGE BEARING 4 HOLE 1-1/2
14	FRAPC-A00147	1	ASM WOOD CHIP CONVEYOR HEAD
15	FRAPC-A00146	1	ASM SHAFT PROTECTOR
16	664024	31	HEX. CAP SCREWS 1/2-13 X 1-1/2" ZINC
17	FRAPC-M00022	1	ASM WOOD CHIP FEEDER SCEW
18	FRAPC-A00150	1	ASM DRIVING SHAFT FEEDER
19	667766	2	COUPLING LOVE JOY 2-1/4"
20	667767	1	SPIDER 225 URETHANE
21	FRAPC-P00395	2	SHEET METAL
22	FRAPC-A00156	2	ASM HALF PIPE FEEDER 7.5
23	FRAPC-A00157	1	ASM HALF PIPE FEEDER 7.5
24	FRAPC-A00158	1	ASM HALF PIPE FEEDER 7.5
25	FRAPC-P00396	3	SHEET METAL
26	FRAPC-P00398	3	SHEET METAL
27	FRAPC-P00397	3	SHEET METAL
28	665360	56	ZINC WASHER 1/2"
29	FRAPC-P00422	2	SHEET METAL
30	FRAPC-N00187	1	ELECTRICAL POWER SUPPLY GROUP



Installation

1. **Feeder Environment:** Ensure that the space chosen for the feeder installation is sheltered from the elements and equipped with adequate ventilation to evacuate dust, thereby reducing the risks of fires and dust accumulation on mechanical components.
2. **Accessibility for Maintenance:** Plan for easy access to mechanical components to facilitate maintenance and minimize downtime in case of a breakdown.
3. **Room Dimensions:** The room dimensions can vary depending on your needs, but ensure that you adhere to the necessary constraints to reduce dead volumes and ensure the mechanical compatibility of the equipment. It is crucial that the chosen space and the sugarhouse are designed accordingly. Please consult your representative to validate these parameters.
4. **Space for the Air Supply System:** Allocate a dedicated space for incorporating the evaporator's air supply system, positioned as close as possible to the evaporator.
5. **Rotation Direction Validation:** It is essential to validate the direction of rotation of the equipment before installation to ensure proper operation.
6. **Consultation with Expert Team:** Installing this type of equipment requires considering several factors. Our expert team is available to guide you through each step of the process.
7. **Installation Layout:** For optimal installation, it is recommended to create an installation layout in collaboration with our expert. This visualization will help you plan and execute the installation efficiently.

Carefully follow these guidelines to ensure a successful installation and to maximize the performance of your equipment. If you have any questions or concerns, do not hesitate to seek assistance from our specialized team.

Chip Storage and Quality

The quality of the wood chips is crucial for ensuring optimal performance of your evaporator. As the primary fuel source, it is essential to adhere to specific storage conditions.

1. Moisture Content: The wood chips must be kept dry, with a moisture content of approximately 20% (W20), to ensure efficient combustion. Storage should take place in a location free from water or moisture, thereby preserving the quality of the fuel.

2. Particle Size: The wood chips must adhere to a specific particle size, ranging between G30 and G100, to ensure they are perfectly suited for your evaporator. Make sure to use chips that comply with these standards for optimal performance.

3. Aeration and Mixing: Special attention must be given to the aeration and occasional mixing of the wood chips. This prevents any deterioration of the fuel. Refer to the table below for detailed guidelines on handling the wood chips.

Moisture Content Classification		
Quality Class	Moisture Content	Description
W20	<20%	Air-Dried
W30	20% - 30%	Storable
W35	30% - 35%	Storable Limit
W40	35% - 40%	Wet
W50	40% - 50%	Green (Freshly Harvested)

Size Classification						
Chip class	< 4% of Particles	< 20% of Particles	60% - 100% of Particles	< 20% of Particles	Max Surface Area (cm ²)	Max Length (cm)
G30	< 1 mm	1 - 3 mm	3 - 16 mm	> 16 mm	3	8.5
G50	< 1 mm	1 - 6 mm	6 - 32 mm	> 32 mm	5	12
G100	< 1 mm	1 - 11 mm	11 - 63 mm	> 63 mm	10	25
G120	< 1 mm	1 - 63 mm	63 - 100 mm	> 100 mm	12	30
G150	< 1 mm	1 - 100 mm	100 - 130 mm	> 130 mm	15	40

By following these recommendations, you ensure a consistent and high-quality feed for your evaporator. Well-preserved wood chips contribute not only to energy efficiency but also to the durability of your equipment. Adhere to these guidelines for an optimal maple syrup production experience.

Wood Chip Consumption

Wood Chip Consumption Based on Evaporator Dimensions		
Evaporator Dimensions	BTU / Hour	Cu. ft. Chips / Hour
3 x 11	1 820 000	21
3.5 x 13	2 310 000	25
4 x 15	2 520 000	38
5 x 16	4 480 000	53
6 x 16	5 040 000	63
6 x 18	5 320 000	70
7 x 18	6 440 000	77

Operation

To ensure optimal operation of the wood chip feeder screw during its use, carefully follow these guidelines.

1. Initial Operation:

During the first operation, it is important not to overload the hopper with wood chips. Make sure to validate the proper functioning of the equipment before increasing the load.

2. Rotation Direction Check:

Regularly checking the rotation direction of the equipment is essential to ensure the proper functioning of the feeder screw. Ensure that the rotation complies with specifications to avoid any malfunction.

3. Feeding the Transition Hopper:

It is important to ensure that the feeder never overfills the transition hopper. The feed should be continuous, and speeds should be adjusted according to the evaporator's demand.

Storage

When preparing your equipment for storage, follow these steps to ensure its preservation and good condition for the next use.

1. Power Off:

Before proceeding with storage, make sure to cut off the power supply to the equipment. This ensures increased safety and prevents any accidental activation during maintenance and storage.

2. Cleaning the Hopper and Screw:

A thorough cleaning of the feed hopper and screw is important before storage. Ensure that all residues are removed to avoid any risk of deterioration during the inactivity period.

3. Feeder Arms Inspection:

Check the condition of the feeder arms and verify the tension of the retaining nuts. These should not be fully tightened, and the blades should be free to move. Ensure everything is in order for optimal use when the equipment is put back into service.

4. Speed Reducers Maintenance:

Check the oil level of the speed reducers. Add oil if necessary, and plan a full oil change every two years to maintain optimal equipment performance.

5. Motor Belt Tension:

Check the tension of the motor belts on the screw and adjust them as needed. Well-maintained belts contribute to the reliability and durability of the equipment.

Warranty

Your wood chip feeder is covered by a limited two-year warranty. For two years from the date of original purchase, Les Équipements d'érablière CDL Inc. will repair or replace parts of this equipment that are found to be defective in material or workmanship, if this equipment is installed, used, and maintained according to the instructions provided in the user manual.

Exclusions

This warranty does not cover the following:

1. Products whose original serial number has been removed, modified, or is not easily readable.
2. Equipment that has changed ownership or is located outside North America.
3. Production losses due to any problem with the equipment.
4. Revenue losses caused by syrup quality.
5. Service calls not related to malfunction, manufacturing defect, or material defect, or for products not used according to the provided instructions.
6. Service calls to check your equipment's installation or to obtain instructions on equipment use.
7. Costs incurred to make the equipment accessible for repair and travel expenses.
8. Service calls after two years.
9. Damages caused by: repairs done by unauthorized technicians; use of non-original CDL parts or parts not obtained through an authorized technician; or external causes such as abuse, misuse, accidents, fire, or natural disasters.
10. Consumable products and accessories.
11. If the equipment has been damaged due to misuse, negligence, modifications made by the customer, or electrical issues.
12. Damages caused by the use of products not intended for use with this equipment, misuse of cleaning products, etc.
13. Use of contaminated or non-standard chips.
14. Use of any fuel other than wood chips.
15. The warranty for electric motors is covered only upon approval by CDL's service department. Any device or electrical or electronic component powered by a generator is not covered under the CDL warranty.

Warranty Disclaimer; Limitations of Remedies

The customer's sole remedy under this limited warranty is the repair or replacement of the product as described above. Claims based on warranties, including warranties of merchantability or fitness for a particular purpose, are limited to two years or the shortest period allowed by law, which shall not be less than two years. Les Équipements d'érablière CDL Inc. shall not be held liable for incidental or consequential damages or for implied or material damages. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or limitations on warranties. In such cases, these exclusions or limitations may not apply. This written warranty gives you specific legal rights. You may also have other rights which vary by state or province.

If you require repair service

Keep your receipt, delivery slip, or any valid proof of payment to establish the warranty period if you need to request repair service. If a repair is performed, it is in your best interest to obtain and keep all receipts. Warranty service must be obtained by contacting CDL at the address or phone numbers listed below.

Service for your equipment will be provided by CDL in Canada. Features and specifications described or illustrated may change without notice.

CDL Sugaring Equipment Inc.

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