



TOWER DRYER

with
QuadraTouch Pro™
Dryer Control System



OWNER'S OPERATION MANUAL

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On safety decals and throughout this manual, this symbol and the signal words Danger, Warning, Caution and Notice draw your attention to important instructions regarding safety. They indicate potential hazards and levels of intensity.



DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

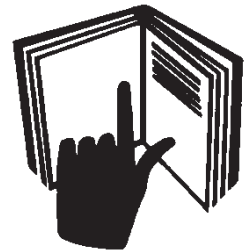


NOTICE alerts you to practices unrelated to personal injury, such as messages related to property damage.

IMPORTANT: To prevent death or serious injury to you or your family, it is essential that safety decals are clearly visible, in good condition, and applied to the appropriate equipment.

FOLLOW MANUAL & SAFETY DECAL MESSAGES

Observe safe operating practices. Carefully read this manual and all safety decals on your equipment. Safety decals must be kept in good condition. Replace missing or damaged safety decals free of charge by contacting Sukup Manufacturing Co. by mail at PO Box 677, Sheffield, Iowa USA 50475; by phone at 641-892-4222; or on our website, www.sukup.com.



Learn how to use controls and operate machine. Do not operate without safety shields in place. Worn or missing shields can be replaced free of charge by contacting Sukup Manufacturing Co.

Do not let anyone operate unit without thorough training of basic operating and safety procedures. Owners/operators need to know what specific requirements, precautions, and work hazards exist. It is their responsibility to inform anyone near equipment of hazards and safety precautions that need to be taken to avoid personal injury. Always keep children away from bins and vehicles with flowing grain.

Make no unauthorized modifications to machine. Modifications may endanger function and/or safety of unit. Keep unit well-maintained according to procedures in Maintenance section of this manual.

NOTICE: Do not dump polluting liquids, worn parts and maintenance waste into the environment. Dispose of all such materials as specified by applicable standards.



WARNING: PREVENT EXPLOSION OR FIRE

- Carefully review operator's manual
- Keep dryer clean inside and out, as fines may cause a fire
- Check for gas leaks by spraying soapy solution on piping and joints
- Run fan at least half a minute before starting heater
- NEVER start heater if you smell gas or hear a hissing sound
- NEVER run heater with inspection door open

Failure to heed these warnings could cause death or serious injury.



ANALYZE ARC FLASH/SHOCK HAZARD. Installations of equipment containing switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers are subject to National Electrical Code (NEC) and National Fire Protection Association (NFPA), and enforced under Occupational Safety and Health Administration (OSHA) regulations. These installations must be analyzed for arc flash and shock hazard. Additional requirements under these standards include:



- Facility needs to have written electrical safety program.*
 - Equipment shall be FIELD MARKED with a label containing available incident energy and/or required Personal Protective Equipment (PPE) level.
- This labeling requirement is employer's responsibility and not that of equipment manufacturer or installer.**

- All persons working on or near affected equipment must be properly trained.
- Proper tools and equipment must be provided by installation operator or employer.

*NFPA 70E has numerous significant changes in 2012 edition. Be sure to update your facility's safety program.

USE PROPER LOCKOUT PROCEDURES. Facility management needs to proactively train employees to ensure use of proper lockout procedures while working on dryer. Management also needs to inspect this unit for any covers or guards not in proper place. It is everyone's responsibility to report any missing grates, guards, equipment failures or failures to lock out. Make certain that no cover is removed unless power is locked out.

NOTE: Refer to OSHA's typical minimal lockout procedures (29CFR 1910.147 App A).

Basic Safety Rules

1. Learn how to use controls and operate equipment.
2. Do not let anyone operate unit without thorough training of basic operating and safety procedures. **Always follow a proper lockout procedure.**
3. Periodically check all mechanical and electrical components. Keep unit in good working condition.
4. Handle equipment and parts with care. **Wear protective clothing** to avoid injury from sharp metal edges.
5. Wear Personal Protective Equipment (PPE) such as safety glasses, gloves, hardhat, steel-toe boots, ear protection and dust mask as required by local, state and national regulations.

Good housekeeping practices and correct safety procedures will help protect lives, jobs, property and profits.

Please contact Sukup Manufacturing Co. with any specific safety questions about dryer or its use!

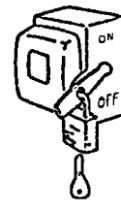


To avoid electric shock or electrocution, all equipment must be properly wired and grounded according to electrical codes. Have unit wired by qualified electrician.

Have an electrician install a main power disconnect switch capable of being locked only in OFF position.

Mark disconnect clearly as to equipment it operates. Always lock out main power disconnect switch whenever equipment is not in use.

Service Disconnect



WARNING: When servicing equipment, never enter bin unless all power is locked out and another person is present. Always LOCK OUT all power and always check with voltage meter before servicing.

Failure to do so could result in death or serious injury.

NOTE: Refer to OSHA's typical minimal lockout procedures (29CFR 1910.147 App A) at www.osha.gov to establish a written plan for your work site.



WARNING: KEEP CLEAR OF ALL MOVING PARTS.

Keep people (ESPECIALLY YOUTH) away from equipment, particularly during operation.

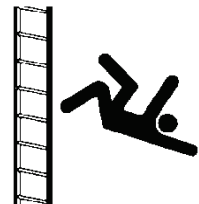
Keep away from all moving parts. Keep all shields and screen guards in place. **SHUT OFF AND LOCK OUT** all power before servicing.

Failure to follow precautions above could result in death or serious injury.



WARNING: METAL IS SLIPPERY WHEN WET

Inspect ladder carefully before use. Never climb deteriorated, damaged or improperly assembled ladder components. Maintain secure hand and foothold when climbing. Never carry items while climbing. Use safety harness and safety line as required by safety regulations.



Failure to heed these precautions could result in death or serious injury.



CAUTION: Metal edges are sharp. To avoid injury, wear protective clothing and handle equipment and parts with care. Failure to do so may result in minor or moderate injury.

PERSONAL PROTECTIVE EQUIPMENT

Owners/Operators are responsible for developing site-specific personal protective equipment standards.

These include, but are not limited to personal protective equipment for eyes, face, head, and extremities, as well as protective clothing and respiratory devices.

For a complete listing of OSHA's personal protective equipment standards go to www.osha.gov (29CFR 1910.132).



Refer to OSHA 1910.132
(Personal Prot. Equip.)

Grain Bin Safety

When entering a bin, owners/operators are responsible for following site-specific confined space entry procedures. OSHA's confined space entry procedures (29CFR 1910.146) can be found at www.osha.gov.

If you must enter bin for repair or maintenance:

- Use a safety harness, safety line and respirator
- Station another person outside of bin
- Avoid the center of the bin
- Wear appropriate personal protective equipment
- Keep clear of all augers and moving parts



DANGER: Never enter bin unless all power is locked out and another person is present.

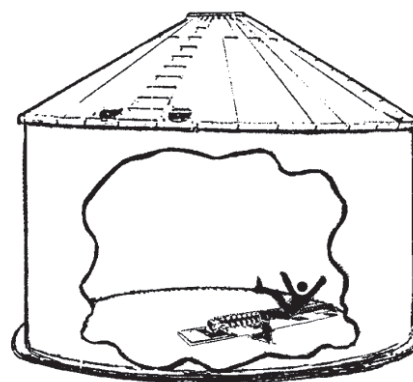


**Rotating augers
can kill or
dismember!**

NEVER enter bin when augers are running!

When bin is nearly empty, sweep auger will travel at an increasingly fast speed. Keep away from sweep and sump augers to avoid entanglement.

Failure to follow these precautions will result in death or serious injury.



DANGER: Flowing grain may trap and suffocate. If you enter a bin of flowing grain you can be completely submerged in grain in about 8 seconds.

Failure to heed this warning will result in death or serious injury.



EMERGENCIES - KNOW WHAT TO DO

Have emergency numbers and written directions to work site readily available in case of emergency. An area to record emergency information is provided below.

Ambulance • Fire • Police: 9-1-1

Farm rescue team: _____

Local EMS team: _____

Address of work site: _____

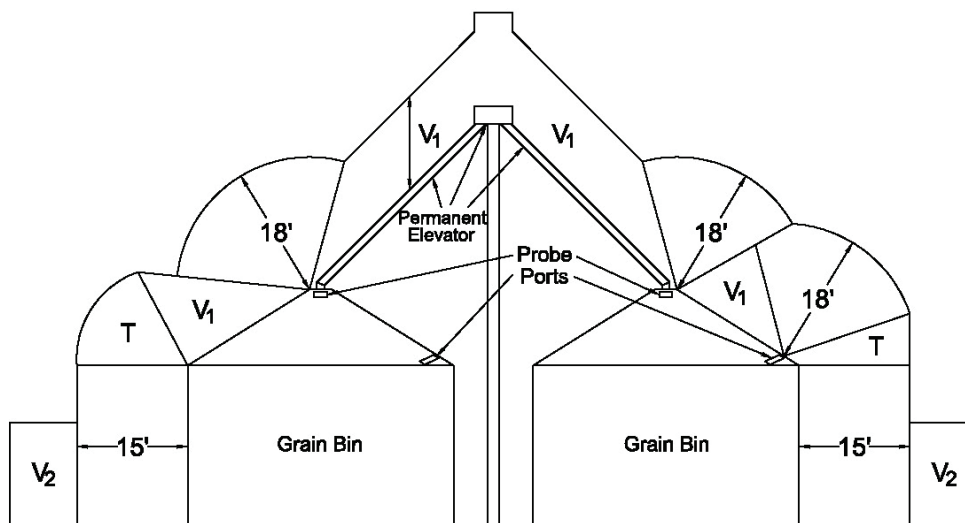
Directions to work site: _____

Electrical Wire Clearances

Your local electric utility may be able to provide assistance in planning a safe environment for working around tower dryers and associated structures. State codes may vary regarding specific clearances for electrical lines around structures. Be certain your local electric utility is in accordance with your state's regulations. **To prevent overhead safety issues, bury electrical lines.**

The American National Standards Institute (ANSI) provides clearance envelopes for Grain Bins filled by permanently installed augers, conveyors or elevators in (ANSI) C2 2007 "National Electrical Safety Code," Rule 234, page 120.

NOTE: An electric utility company may refuse to provide electrical service to any tower dryer or grain bin built near an existing electric line that does not provide clearance required by ANSI and the National Electrical Safety Code.



V_1 = Vertical clearance above a building required by Rule 234C (Table 234-1)

V_2 = Vertical clearance above land required by Rule 232

T = Transition clearance

Fig. 1 – Electrical wire clearances

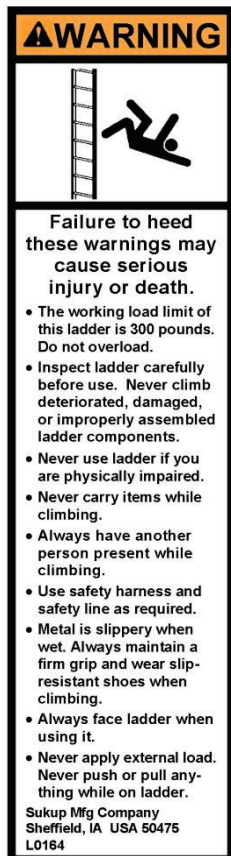
Safety Section

To prevent death or serious injury to people involved in operation of this equipment, it is essential that these safety decals be mounted on dryer. Check that all are in place according to the decal placement drawing and are legible when dryer is installed.

IMPORTANT: If suggested locations are not clearly visible, place safety decals in a more suitable area. Never cover up existing safety decals.

Make sure location for decal is free from grease, oil and dirt. Remove backing from decal and place in proper position. Replace missing or damaged safety decals or shields free of charge by contacting Sukup Manufacturing Co. by mail at Box 677, Sheffield, Iowa 50475 USA; by phone at 641-892-4222; or by e-mail at info@sukup.com. Please specify number when ordering.

1. Decal L0164 – WARNING: Ladder safety – falling from heights hazard. Overall precautions for ladder safety.



2. Decal L0258A – DANGER: Do not enter this bin! Keep clear of all augers.



3. Decal L0520 – CAUTION: Failure to keep unit clean may cause fire and serious injury or death.



4. Decal L0237 – WARNING: To prevent serious injury or death.



5. **Decal L0165 – WARNING:** Disconnect Electricity; Bleed gas; etc.



6. **Decal L0284 – WARNING:** Keep away from all moving parts.



7. **Decal L0281 – WARNING:** To avoid serious injury or death.



