CE Approved Portable Dryer
Wiring Diagrams

Model: 1100 Series
Electrical Installation Manual

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1. Safety

Safety Guidelines

Safety guidelines are general-to-specific safety rules that must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times. Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in SERIOUS INJURY or DEATH.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which must be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities. Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.
1. Safety

Cautionary Symbols Definitions

Cautionary symbols appear in this manual and on product decals. The symbols alert the user of potential safety hazards, prohibited activities and mandatory actions. To help you recognize this information, we use the symbols that are defined below.

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

**WARNING**
This symbol indicates a potentially hazardous situation which, if not avoided, can result in serious injury or death.

**CAUTION**
This symbol indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

**NOTICE**
This symbol is used to address practices not related to personal injury.

This symbol indicates a general hazard.

This symbol indicates a prohibited activity.

This symbol indicates a mandatory action.
1. Safety

Safety Cautions

Use Personal Protective Equipment

• Use appropriate personal protective equipment:
  - Eye Protection
  - Respiratory Protection
  - Foot Protection
  - Hearing Protection
  - Head Protection
  - Fall Protection
  - Hand Protection

• Wear clothing appropriate to the job.
• Remove all jewelry.
• Tie long hair up and back.

Follow Safety Instructions

• Warning: If the information in the manual is not followed exactly, a fire or explosion can result, causing property damage, personal injury or loss of life.
• Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.
• Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.
• If you do not understand any part of this manual or need assistance, contact your dealer.
• Retain these instructions for future reference.
1. Safety

For Your Safety

- If you smell gas:
  1. Do not try to light any appliance.
  2. Extinguish any open flames.
  3. Do not touch any electrical switch.
  4. Immediately call your gas supplier. Follow the gas supplier’s instructions.
  5. If you cannot reach your gas supplier, call the fire department.

- The use and storage of gasoline and other flammable vapors and liquids in open containers in the vicinity of this appliance is hazardous.

- Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment. Installation and service must be performed by a qualified installer, service agency or the gas supplier.

Install and Operate Electrical Equipment Properly

- Electrical controls must be installed by a qualified electrician and must meet the standards set by applicable local codes (National Electrical Code for the US, Canadian Electric Code, or EN60304 along with applicable European Directives for Europe).

- Lock-out power source before making adjustments, cleaning or maintaining equipment.

- Make sure all equipment and bins are properly grounded.

Keep Hands Away from Moving Parts

- Do not operate the fan with electrical or mechanical guards removed. Serious injury or death can result.

- Do not put hand or arm in fan. Rotating parts can crush and dismember.

- Do not put any kind of tool inside the fan to clear debris while the fan is operating. Damage to the equipment will result.

- Lock-out power source before making adjustments, cleaning or maintaining equipment.
1. Safety

Maintain Equipment and Work Area

- Understand service procedures before doing work.
- Keep area clean and dry.
- Do not service equipment while it is operating. Disconnect and lock-out power and fuel supply before entering equipment or before performing maintenance.
- Keep your equipment in proper working condition. Replace worn or broken parts immediately.
- Depressurize the fuel train before disassembling for service.
- Allow the fan to operate for 20 minutes with the burner off to purge products of combustion and to cool the components before entering.
- Check regularly for any developing gas plumbing leaks. Do not operate the dryer if any gas leak is detected. Shut down and repair before further operation.

Maintain Equipment and Work Area

- Equipment is intended for the use of grain drying only. Any other use is a misuse of this equipment.
- The operating instructions in this manual pertain to the common cereal grains as indicated. When drying any other grain, contact GSI for additional recommendations.
- Be certain that capacities of auxiliary conveyors are matched to dryer metering capacities.
- On LP fired units, set pressure regulator to avoid excessive gas pressure applied to the burner during ignition and operation. Do not exceed maximum recommended drying temperatures.
- Equipment has sharp edges that can cause serious injury. To avoid injury, handle sharp edges with caution and use proper protective clothing and equipment at all times.
- All guards must be in place before and during operation. Images of guards removed in this manual are for illustration purposes only.
- Use caution when working around high-speed fans, gas burners, augers and auxiliary conveyors which can start automatically.
- Keep hands, feet and clothing away from moving parts.
- Do not bypass any safety device or interlock.
- Do not enter the dryer or bin while it is operating.
- Do not operate in an area where combustible material will be drawn into the dryer.
1. Safety

Exercise Caution When Drying Flammable Grains

- Be aware that some grains are highly flammable including but not limited to rapeseed, canola, linseed, sunflower and milo.
- All grain and seed must be whole (minimal cracking or crushing), clean and dust free before drying.
- Avoid dust and chaff from being drawn into the fan and heater.
- To reduce risk of fire, keep the fan, heater, drying plenum and ducts clean at all times.
- In the event of a fire (or suspected fire):
  1. Shut down the entire dryer.
  2. Turn OFF the fuel at the tank or supply valve.
  3. Shut off and lock electrical power.
  4. Evacuate the area.
  5. Call the fire department.

Fall Hazard

- Ladders, stairways and platforms are for use by competent and trained personnel only. Do not allow children or other unauthorized persons to have access to the equipment.
- Access to the equipment must be restricted by the use of security fencing and lockable gates.
- Lower sections of ladders must be fitted with a lockable safety gate to prevent unauthorized access.
- Make sure that hot surfaces have had adequate time to cool before working on or in the equipment.
- Lock out and tag out power supplies and fuel supplies to all equipment.
- Do not attach lifting equipment to ladders or platforms.
- Do not go outside of the safety rails provided on elevated platforms.
- Do not work at heights during high winds, rain, snow or ice storms.
1. Safety

Confined Space Hazards and Entry Procedures

- Note that the interior of this equipment is considered a confined space. Maintenance of this equipment can require access to the confined space.
- Access doors must be shut and locked except when access is required.
- Doors giving access to dangerous equipment must be safety interlocked.
- The following entry procedures must be followed:
  - Be aware of all possible hazards present inside the confined space and wear personal protective equipment (PPE) as needed.
  - Complete a permit to work and follow all permit required confined space entry procedures defined by the site manager.
  - Make sure that the area has been purged of any hazardous products or gases. Check the atmosphere for harmful gases or vapors with a suitable gas analyzer and make sure levels are safe before entering.
  - Do not smoke or use naked flames.
  - Lock out and tag out power supplies and fuel supplies to all equipment.
  - Do not work alone. Work in teams of at least three so that help is immediately available in the event of an emergency.
  - Confirm that all personnel have safely exited the equipment and tools have been recovered once work is complete.

Install and Operate Equipment Properly

- Before attempting to remove and reinstall the fan blade, contact GSI for the recommended procedure.
Safety Sign-Off Sheet

Below is a sign-off sheet that can be used to verify that all personnel have read and understood the safety instructions. This sign-off sheet is provided for your convenience and personal record keeping.

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1. Safety

Emergency Stop Switch

In event of emergency press the Emergency Stop to stop all dryer equipment (power remains connected).
Power Circuit Diagram Touch Screen Dryer 400 VAC 3 PH
2. CE VFD Vision Wiring Diagrams for 1100 Series

Vision Upper Control Panel
Liquid Propane VPS Fan/Heater Wiring Diagram
Liquid Propane VPS Fan/Heater Wiring Diagram (Continued)
Liquid Propane VPS Fan/Heater Wiring Diagram (Continued)
Natural Gas VPS Fan/Heater Wiring Diagram
Natural Gas VPS Fan/Heater Wiring Diagram (Continued)
GSI Group, LLC Limited Warranty

The GSI Group, LLC (“GSI”) warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user’s sole remedy (and GSI’s only obligation) is to repair or replace, at GSI’s option and expense, products that in GSI’s judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions:

The Limited Warranty period is extended for the following products:

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12th) month from the date of purchase and continuing until the sixtieth (60th) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) PRODUCT MANUFACTURED OR SOLD BY GSI OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent, or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.
This equipment shall be installed in accordance with the current installation codes and applicable regulations, which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.