Modular Tower Dryer Wiring Diagrams

Model: CSA - Mod/T and F

Electrical Installation Manual

PNEG-2123
Version: 1.0
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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.

ST-0001-3
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.

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

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

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

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.

**Install and Operate Equipment Properly**
- Before attempting to remove and re-install the fan blade, contact GSI for the recommended procedure.
1. Safety

Install and Operate Gas-Fired Equipment Properly

- Gas-fired equipment should be installed by a qualified pipe fitter and must conform with local codes.

- For Canada: The equipment shall be installed in accordance with the *Natural Gas and Propane Installation Code, CSA B149.1*, or the *Propane Storage and Handling Code, CSA B149.2*, or applicable provincial regulations, which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

- For the United States: The equipment shall be installed in accordance with the *National Fuel Gas Code ANSI Z223.1/NFPA 54*.

For Your Safety

- If you smell gas:
  - Do not try to light any appliance.
  - Extinguish any open flames.
  - Do not touch any electrical switch.
  - Immediately call your gas supplier. Follow the gas supplier’s instructions.
  - 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 EN60204 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.
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.

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 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

- Keep access door closed while on a platform to avoid falls.
- Always use proper personal protective equipment and proper clothing when using equipment. Failure to follow safety precautions can result in severe injury or death.
1. Safety

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.

Stay Clear of Hoisted Equipment

- Always use proper lifting or hoisting equipment when assembling or disassembling equipment.
- Do not walk or stand under hoisted equipment.
- Always use sturdy and stable supports when needed for installation. Not following these safety precautions creates the risk of falling equipment, which can crush personnel and cause serious injury or death.
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.

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.
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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<th>Supervisor Name</th>
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CSA Mod Wiring Diagrams
2. CSA Mod Wiring Diagrams

CSA Ladder Logic Power Connections

Figure 2A
CSA Ladder Logic Fan/Heater Operations

Figure 2B

LADDER LOGIC CONTROL - FAN HEATER OPERATION

121 PANEL E STOP
122 LOAD AUGER SWITCH
123 AUTO MANUAL
124 FAN MANUAL/AUTO
125 AIR PRESSURE SW
126 FAN START STOP
127 OUTER SERVICE LIGHT SW
128 FLAME DETECTOR
129 UNLOAD AUGER SWITCH
130 AUTO OFF MANUAL
131 PANEL POWER
132 POWER ON CONTACT
133 GRAN LOW
134 GRAN HI
135 GRAN O.FLOW
136 FAN SW INTERNAL LAMP
137 BURNER ON LAMP
138 BURNER
139 OUTER SERVICE LIGHT
140 BURNER SW INT LAMP (V1)
141 UNLOAD CONVEYOR
142 METERING ROLLS

PNEG-2123 Modular Tower Dryer Wiring Diagrams for CSA

15
2. CSA Mod Wiring Diagrams

CSA Ladder Logic BCM Operation

Figure 2C
CSA Ladder Logic Main I/O Operations

Figure 2D
2. CSA Mod Wiring Diagrams

CSA Ladder Logic Fan/Heater Operation

![Ladder Logic Control - Fan Heater Board Diagram]

Figure 2E
CSA Ladder Logic Switch I/O Operation

Figure 2F
2. CSA Mod Wiring Diagrams

CSA Ladder Logic Safety Relay Operation

Figure 2G
## CSA ACL Mod/T and F Panel Layout

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<td>2</td>
<td>Breaker</td>
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<tr>
<td>3</td>
<td>Distribution Block (GT3-0484)</td>
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<td>4</td>
<td>Control X-Former</td>
</tr>
<tr>
<td>5</td>
<td>Motor Starter</td>
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<td>6</td>
<td>Fan/Heater Board (D03-0723)</td>
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<td>7</td>
<td>PLC</td>
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<td>8</td>
<td>Main I/O Board</td>
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<td>10</td>
<td>Ignition X-Former</td>
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<td>Airswitch</td>
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<td>Control X-Former C/B</td>
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</table>
CSA Soft Start Mod/T and F Panel Layout (Page 1)

Figure 2I
2. CSA Mod Wiring Diagrams

### CSA Soft Start Mod/T and F Panel Layout

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</tbody>
</table>
2. CSA Mod Wiring Diagrams

CSA Mod/T and F Dryer Notes (Page 2)

Figure 2J

A. SUPPLY PROTECTION TO BE PROVIDED BY CUSTOMER/INSTALLER

B. ASSEMBLER & INSTALLER - VERIFY XFMR CONFIG

C. DRIVE PROGRAM: POWERFLEX 40(CSA)

D. INSERT JUMPER BAR TERMINAL BETWEEN (14-20), (24-27) & (41-46)

E. CR1 = LOW GAS PRESSURE

CR2 = AIR SWITCH

CR3 = HIGH GAS PRESSURE

CR4 = GRAIN HIGH LIMIT

P035 = SET TO 60

F. TIME DELAY RELAY SETTINGS:

DIP SWITCH I = OFF

DIP SWITCH II = OFF

DIP SWITCH III = OFF

DIP SWITCH IV = ON

TIME DIAL = 2

H. DIP SWITCH SETTINGS

P031 = SET TO 460V

P032 = LEAVE AS SET

P033 = MOTOR FLA

P034 = SET TO 5.2

P035 = SET TO 60

P036 = SET TO 2

P037 = 0 (RSMP STOP)

P038 = SET TO 2

P039 = 10 (ACCL)

P040 = SET TO 1.0

NOTES ARE NOT SHOWN IN EXACT SCHEMATIC PAGES

COLOR LEGEND

GRAY

WHITE/BLACK STRIPE

BLUE

GREEN

RED

BROWN

PINK

PURPLE

YELLOW

ORANGE

BLACK

WHITE

5

SUPPLY PROTECTION TO BE PROVIDED BY CUSTOMER/INSTALLER
Figure 2K

2. CSA Mod Wiring Diagrams

PNEG-2123 Modular Tower Dryer Wiring Diagrams for CSA

CSA Mod/T and F Dryer Terminal Strip Function (Page 3)

1. "F" TERMINALS ON FAN HEATER BOARD
2. "M" TERMINALS ON MAIN I/O BOARD
3. "X" TERMINALS ON SIEMENS BURNER CONTROL

NOTES:
Figure 2L
CSA Mod/T and F Dryer Switch I/O Connections (Page 5)

Figure 2M
Figure 20
CSA Mod Dryer Soft Start with High-Low Valve

Figure 2Q

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PNEG-2123 Modular Tower Dryer Wiring Diagrams for CSA
CSA Mod Dryer ACL Starter with High-Low Valve (Page 7)
CSA Mod Dryer Soft Start with Modulating Valve (Page 7)

Figure 2T
Figure 2W

[Diagram of CSA Mod Dryer ACL Contactor with Modulating Valve]
CSA T and F Wiring Diagrams
3. CSA T and F Diagrams

CSA Ladder Logic Power Connections

Figure 3A
3. CSA T and F Diagrams

CSA Ladder Logic BCM Operation

Figure 3C
CSA Ladder Logic Main I/O Operations

**Figure 3D**

LADDER LOGIC CONTROL - MAIN I/O BOARD

- UNLOAD OLR CONTACT
- LOAD OLR CONTACT
- GRAIN SWITCH
- REAR DISCHARGE
- BLOWER SAMPLER OVERLOAD

- J1 MAIN I/O BOARD
- J2 MAIN I/O CONN
- J6 MAIN I/O CONN
- J7 MAIN I/O CONN

- J6-03
- J6-05
- J7-01
- J7-03

- UNLOAD CONVEYOR
- LOAD CONVEYOR
- MAXON
- VFD REVERSING COMMAND
3. CSA T and F Diagrams

CSA Ladder Logic Fan/Heater Operation

Figure 3E

LADDER LOGIC CONTROL - FAN HEATER BOARD
J4 FAN HEATER I/O BOARD

140
LOW GAS PRESSURE SWITCH

160
FAN MOTOR AUX CONTACT

151
AIR PRESSURE SW

152
HIGH GAS PRESSURE SWITCH

153
GRAIN HI-UNIT

154
PLENUM HI-UNIT

155
VAPOR HI-UNIT (LP ONLY)

156
HOUSING HI-UNIT

157
MOTOR CLR CONTACT

158
HI-L0 VALVE CYCLE SOLENOID

160
J1 F/H I/O CONN

161
V1 (VERIFIED FLAME) J1 F/H I/O CONN

162
SIEMENS BCM

163
J2 F/H I/O CONN

164
BLOWER

165
BURNER START COMMAND (SIEMENS BCM)
CSA Ladder Logic Switch I/O Operation

Figure 3F
CSA Ladder Logic Safety Relay Operation

Figure 3G
### CSA ACL Mod/T and F Panel Layout

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### CSA Soft Start Mod/T and F Panel Layout

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND Lug</td>
</tr>
<tr>
<td>2</td>
<td>Breaker</td>
</tr>
<tr>
<td>3</td>
<td>Distribution Block (GT3-0484)</td>
</tr>
<tr>
<td>4</td>
<td>Control X-Former</td>
</tr>
<tr>
<td>5</td>
<td>Soft Start</td>
</tr>
<tr>
<td>6</td>
<td>Fan/Heater Board (D03-0723)</td>
</tr>
<tr>
<td>7</td>
<td>PLC</td>
</tr>
<tr>
<td>8</td>
<td>Main I/O Board</td>
</tr>
<tr>
<td>9</td>
<td>Burner Control Unit</td>
</tr>
<tr>
<td>10</td>
<td>Ignition X-Former</td>
</tr>
<tr>
<td>11</td>
<td>Airswitch</td>
</tr>
<tr>
<td>12</td>
<td>VFD Line Reactor</td>
</tr>
<tr>
<td>13</td>
<td>VFD</td>
</tr>
<tr>
<td>14</td>
<td>VFD C/B</td>
</tr>
<tr>
<td>15</td>
<td>Load Starter</td>
</tr>
<tr>
<td>16</td>
<td>Unload Starter</td>
</tr>
<tr>
<td>17</td>
<td>Power C/B</td>
</tr>
<tr>
<td>18</td>
<td>Control X-Former C/B</td>
</tr>
</tbody>
</table>
3. CSA T and F Diagrams

CSA Mod/T and F Dryer Notes (Page 2)

Figure 3J

SUPPLY PROTECTION TO BE PROVIDED BY CUSTOMER/INSTALLER

DRIVE PROGRAM: POWERFLEX 40(CSA)

ASSEMBLER & INSTALLER - VERIFY XFRM CONFIG

INSERT JUMPER BAR TERMINAL BETWEEN (7-10), (14-20), (24-27) & (41-46)

TIME DELAY RELAY SETTINGS:

NOTES ARE NOT SHOWN IN EXACT SCHEMATIC PAGES

CR1 = LOW GAS PRESSURE
CR2 = AIRSWITCH
CR3 = HIGH GAS PRESSURE
CR4 = GRAIN HIGH LIMIT
CR5 = PLENUM HIGH LIMIT
P035 = SET TO 60
P036 = SET TO 2
P037 = 0 (RSMP STOP)
P038 = SET TO 2
P039 = 10 (ACCL)
P040 = SET TO 1.0

A. SUPPLY PROTECTION TO BE PROVIDED BY CUSTOMER/INSTALLER
B. CONTROL XFRM CONFIGURATION
240V CONFIGURATION
460V CONFIGURATION

C. DRIVE PROGRAM: POWERFLEX 40(CSA)
P031 = SET TO 460V
P032 = LEAVE AS SET
P033 = MOTOR FLA
P034 = SET TO 5.2
P035 = SET TO 60
P036 = SET TO 2
P037 = 0 (RSMP STOP)
P038 = SET TO 2
P039 = 10 (ACCL)
P040 = SET TO 1.0

D. INSERT JUMPER BAR TERMINAL BETWEEN N7-10, (14-20), (24-27) & (41-46)

E. ASSEMBLER & INSTALLER - VERIFY XFRM CONFIG

F. TIME DELAY RELAY SETTINGS:
DP SWITCH I = OFF
DP SWITCH II = OFF
DP SWITCH III = OFF
DP SWITCH IV = ON
TIME DIAL = 2

GRAY
WHITE
WHITE/BLACK
BLUE
GREEN
RED
BROWN
PINK
PURPLE
YELLOW
ORANGE
BLACK
WHITE

COLOR LEGEND
Figure 3L
3. CSA T and F Diagrams

CSA Mod/T and F Dryer Switch I/O Connections (Page 5)

Figure 3M
CSA T and F Dryer ACL Contactor with Modulating Valve (Page 6)

Figure 3N
Figure 3O
Figure 3Q
CSA T and F Dryer Soft Start with Modulating Valve (Page 7)

Figure 3U
Figure 3V
Figure 3Y
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:

<table>
<thead>
<tr>
<th>Product</th>
<th>Warranty Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Fans and Flooring</td>
<td></td>
</tr>
<tr>
<td>Performer Series Direct Drive Fan Motor</td>
<td>3 Years</td>
</tr>
<tr>
<td>All Fiberglass Housings</td>
<td>Lifetime</td>
</tr>
<tr>
<td>All Fiberglass Propellers</td>
<td>Lifetime</td>
</tr>
<tr>
<td>AP and Cumberland</td>
<td></td>
</tr>
<tr>
<td>Flex-Flo/Pan Feeding System Motors</td>
<td>2 Years</td>
</tr>
<tr>
<td>Cumberland Feeding/Watering Systems</td>
<td></td>
</tr>
<tr>
<td>Feeder System Pan Assemblies</td>
<td>5 Years **</td>
</tr>
<tr>
<td>Feed Tubes (1-3/4&quot; and 2.00&quot;)</td>
<td>10 Years *</td>
</tr>
<tr>
<td>Centerless Augers</td>
<td>10 Years *</td>
</tr>
<tr>
<td>Watering Nipples</td>
<td>10 Years *</td>
</tr>
<tr>
<td>Grain Systems</td>
<td></td>
</tr>
<tr>
<td>Grain Bin Structural Design</td>
<td>5 Years</td>
</tr>
<tr>
<td>Grain Systems Farm Fans Zimmermann</td>
<td></td>
</tr>
<tr>
<td>Portable and Tower Dryers</td>
<td>2 Years</td>
</tr>
<tr>
<td>Portable and Tower Dryer Frames and Internal Infrastructure †</td>
<td>5 Years</td>
</tr>
</tbody>
</table>
| * Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 25% 5 to 7 years - end-user pays 50% 7 to 10 years - end-user pays 75% ** Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 50% † Motors, burner components and moving parts not included. Portable dryer screens included. Tower dryer screens not included.

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.