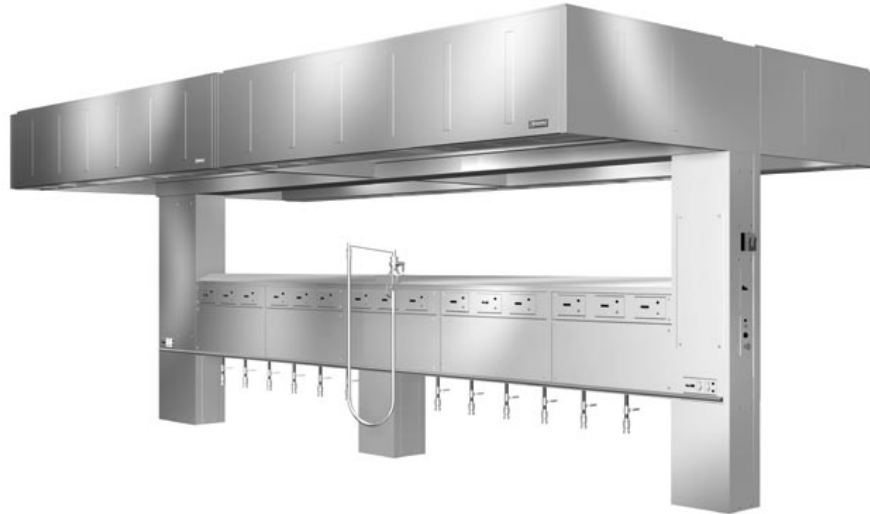


READ AND SAVE THESE INSTRUCTIONS

Utility Distribution System

Installation, Operation and Maintenance Manual



Warning!!

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.

This manual is the property of the owner, and is required for future maintenance. Please leave it with the owner when you complete the job.

Receiving and Handling

Upon receiving the equipment, check for both obvious and hidden damage. If damage is found, record all necessary information on the bill of lading and file a claim with the final carrier. Check to be sure that all parts of the shipment, including accessories, are accounted for.

Table of Contents

Installation	Page
Wall System Model GUW	3
Island System Model GUI	4
Electrical Connections	5
Electrical Fire Fuel Connections	6
Plumbing Connections	7
Hose Assemblies Installation	8
 Operating Instructions	
Ground Fault Connection Plate	9
Power Sensitive Ground Fault Relay	10
Fire Fuel Shut Off	11
Gas 5 Second Delay	11
Remote Status Indicator Lights	11
Ventilator Light Switch.....	11
Exhaust Motor Fan Motor Controls	12
Emergency Stop	12
General Plumbing Instructions	13

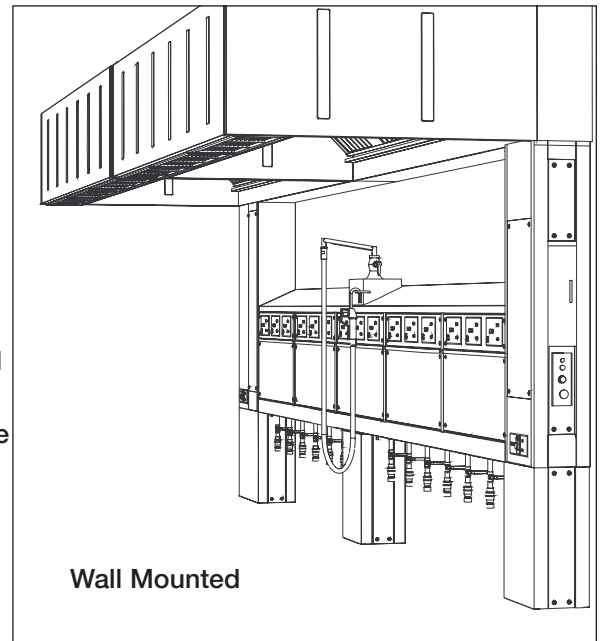
This manual will acquaint you with the operation and proper maintenance of your Utility Distribution System. ***IT IS IMPORTANT THAT YOU READ THIS MANUAL THOROUGHLY AND FOLLOW ITS RECOMMENDATIONS.***
In certain instances the manual make reference to features which may or may not be part of your equipment. To determine whether such references apply to you, please consult your submittal and electrical drawings which have been prepared for you as part of this manual.

UTILITY DISTRIBUTION SYSTEM

Model GUW Installation

A. WALL MOUNTED:

1. Read entire manual and study drawings before starting installation.
2. Check that all electrical and plumbing rough-ins are as specified and agree with the drawing.
3. The GUW system consists of the following parts:
 - a. Riser
 - b. Raceway
 - c. Pedestal (optional)
4. Remove all access panels on raceway, riser and pedestal to reveal internal plumbing, electrical systems, and internal flanges.
5. Place GUW sections according to the drawing to determine the proper mounting positions.
6. Once sections are in position, join field joints (if any) by bolting internal flanges together and applying NSF approved silicone caulk (GE SCS-1009, or its equivalent) over seams. Caulk is not provided.
7. GUW mounting procedures:
 - a. Mount stainless steel channel (shipped loose) in proper location on wall.
 - b. Place unit on channel and insert studs, on the unit, into the holes in the channel.
 - c. Drill holes through unit as shown on drawing and secure properly to wall.
8. If height of GUW interferes with perimeter of hood at time of installation, proceed as follows:
 - a. Remove pedestals
 - b. Slip riser up into hood
 - c. Reattach pedestals
9. Secure field joint support pedestal(s) to the floor as required, and seal the unit to the wall and floor with an NSF approved silicone caulk, (GE SCS-1009, or its equivalent). Caulk not provided.

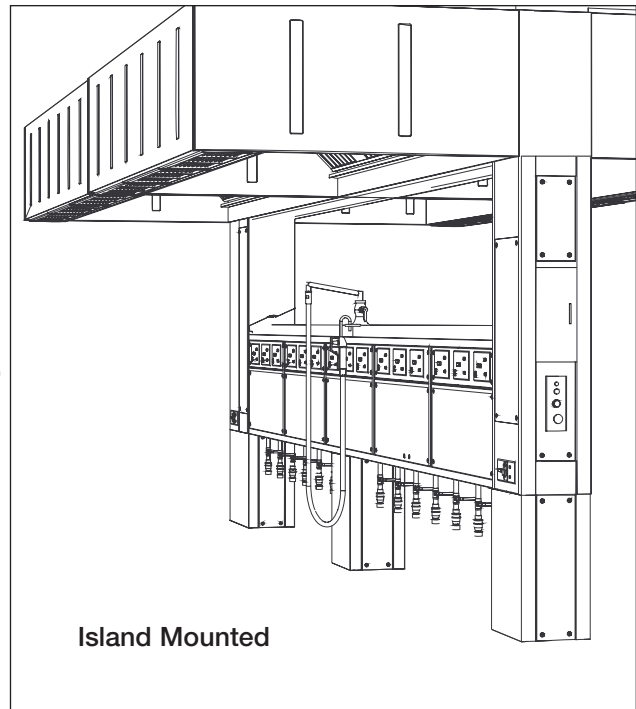


UTILITY DISTRIBUTION SYSTEM

Model GUI Installation

B. ISLAND MOUNTED:

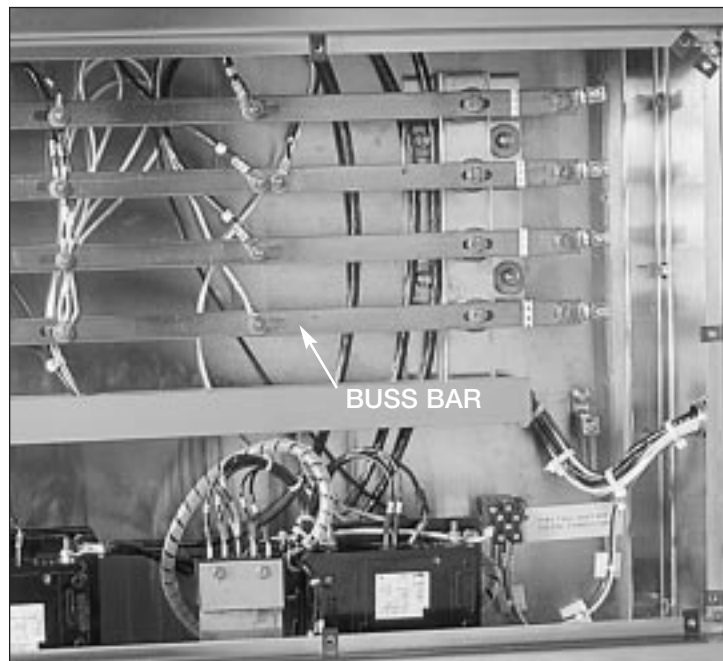
1. Read entire manual and study drawings before starting installation.
2. Check that all electrical and plumbing rough-ins are as specified and agree with the drawing.
3. The GUI system consists of the following parts:
 - a. Riser (optional)
 - b. Raceway
 - c. Pedestal (optional)
4. Remove all access panels on raceway, riser and pedestal to reveal internal plumbing, electrical systems, and internal flanges.
5. Place GUI sections according to the drawing to determine the proper mounting positions.
6. Once sections are in position, join field joints (if any) by bolting internal flanges together and applying NSF approved silicone caulk (GE SCS-1009, or its equivalent) over seams. Caulk is not provided.
7. GUI mounting procedures:
 - a. Drill holes in floor to match the hole pattern of the riser bolt flanges.
 - b. Insert fasteners, (supplied by others) through the holes in the riser bolt flanges and secure to the floor.
 - c. Seal around the bottom of the riser with an NSF approved silicone caulk, (GE SCS-1009, or its equivalent). Caulk not provided.
8. If height of GUI interferes with perimeter of hood at time of installation, proceed as follows:
 - a. Remove pedestals
 - b. Slip riser up into hood
 - c. Reattach pedestals
9. Secure field joint support pedestal(s) to the floor as required, and seal around the bottom with an NSF approved silicone caulk, (GE SCS-1009, or its equivalent). Caulk not provided.



ELECTRICAL CONNECTIONS

Installation

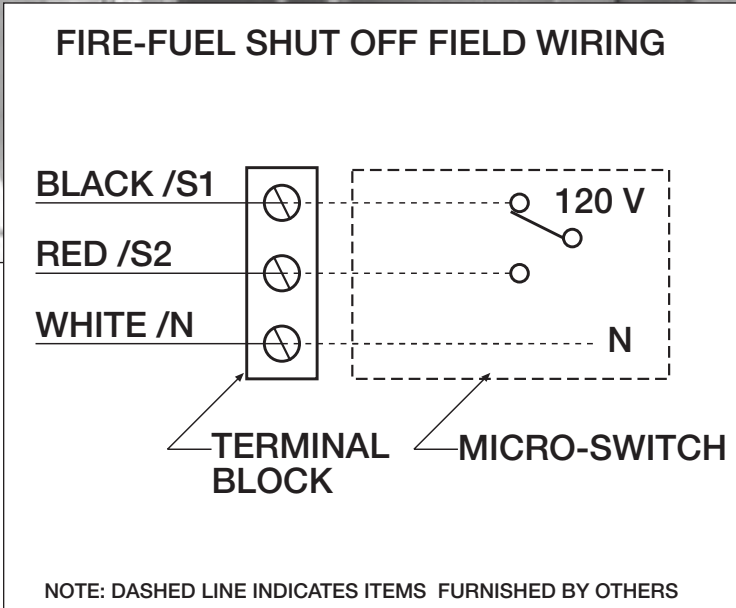
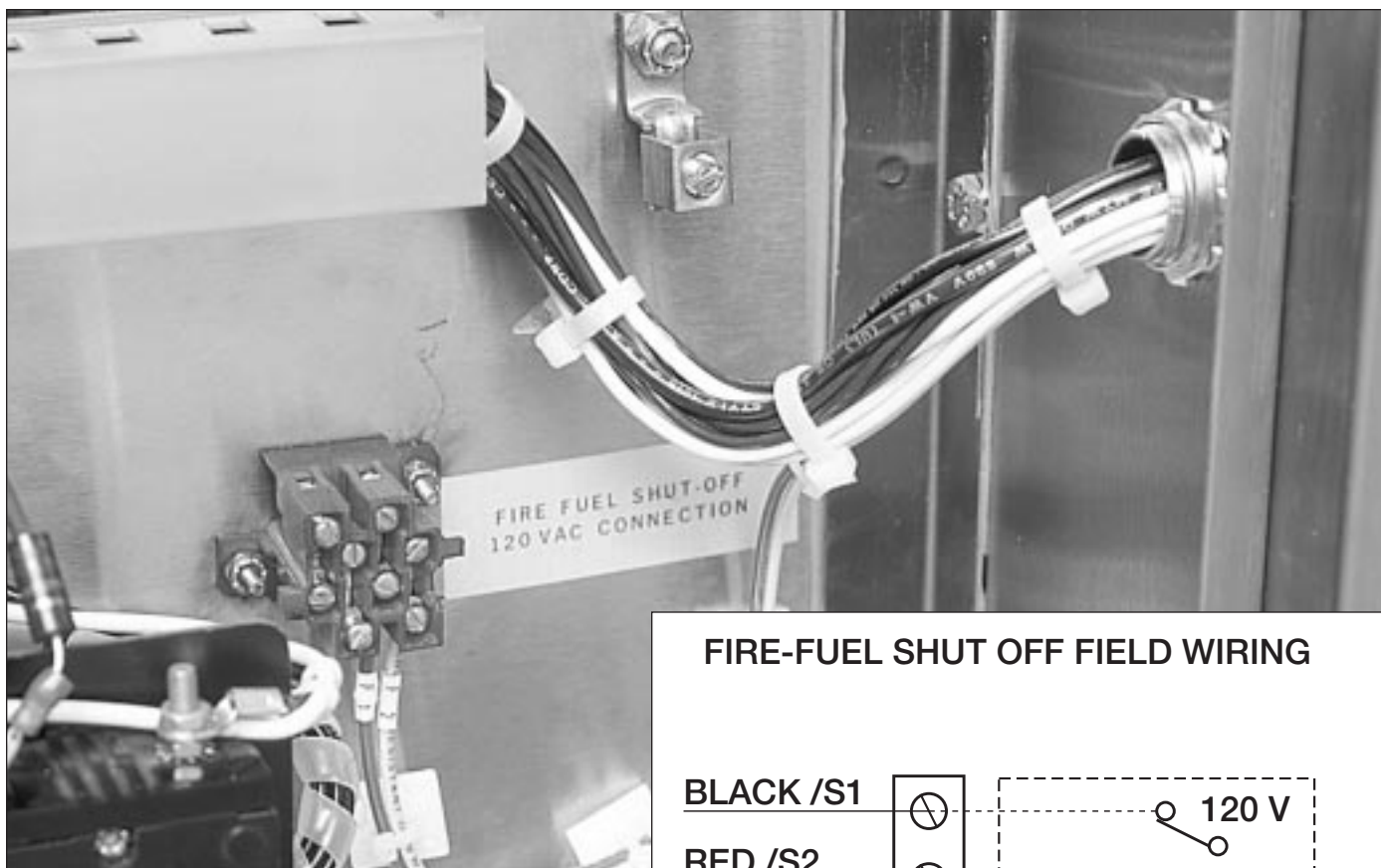
1. If system has field joint(s), wiring must be interconnected at the joint(s) before attaching main service.
 - a. Connect corresponding busbars together with the brass bolts and nuts that are provided.
 - b. Connect control wiring (if supplied) to corresponding terminals or quick disconnect device.
2. Connect the electrical service(s) to the system as follows:
 - a. Secure service conduit to the electrical housing. A service entrance knockout must be provided.
 - b. Attach main service wires to the corresponding terminals.
 - c. For instructions regarding the fire fuel shut-off, *Please see Page 6.*
 - d. Check and tighten all connections.
 - e. Connect all cord assemblies to the appropriate equipment as shown on submittal drawing. Cut cord assemblies if necessary to make a neat appearance.
 - f. Wire conduit from hood light switch (if provided) to hood lights. See electrical drawing.
 - g. Wire from steam timer terminal block (if provided) to remote steam timer. See electrical drawing.
 - h. Wire to exhaust fan motor starter or controls (if provided). See electrical drawing.



ELECTRICAL FIRE FUEL CONNECTIONS

Installation

1. Route three wires in 1/2" conduit (as shown on drawing) from the micro-switch in the fire control system (by others) to the equipment shut-off terminal block (red) in the Utility Distribution System. **DO NOT** remove any existing wires from terminals. Connect wires to the **UNUSED** posts of the labeled terminal block as follows:
 - a. Connect the neutral wire to the terminal labeled "N".
 - b. Locate wire which supplies 120 volts during normal operating conditions (and is switched OFF when fire control system is activated), and connect this wire to the empty terminal labeled "S1".
 - c. Locate wire which is OFF during normal operating conditions (and applies 120 volts when fire control system is activated), and connect this wire to the terminal labeled "S2".



PLUMBING CONNECTIONS

Installation

1. If system has field joint(s), plumbing must be connected at the joint(s) before attaching main service. Connect corresponding pipes by aligning unions and tightening securely.
2. Connect all plumbing stub-ins to the main lines. Provide all necessary nipples, couplers, unions, etc. to make neat and proper connection.
3. Connect all hose assemblies to the appropriate equipment as shown on drawing. Provide all necessary ells and nipples to make neat and proper appearance. (*Please see hose installation instructions on Page 8.*)
4. Check all plumbing for leaks and tighten as required.
5. Connect hood wash system (if provided) to spray nozzles in hood.
6. Replace all access panels.

This equipment is to be installed with adequate backflow protection to comply with federal, state or local codes having jurisdiction.

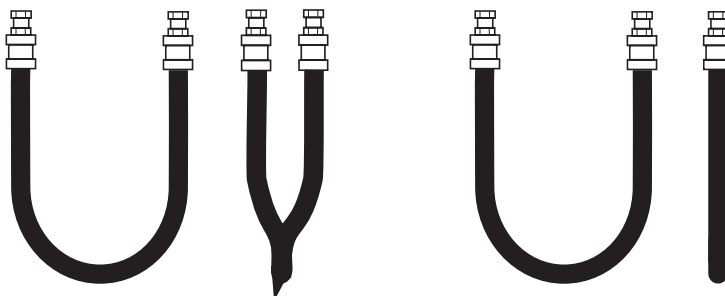


HOSE ASSEMBLIES

Installation

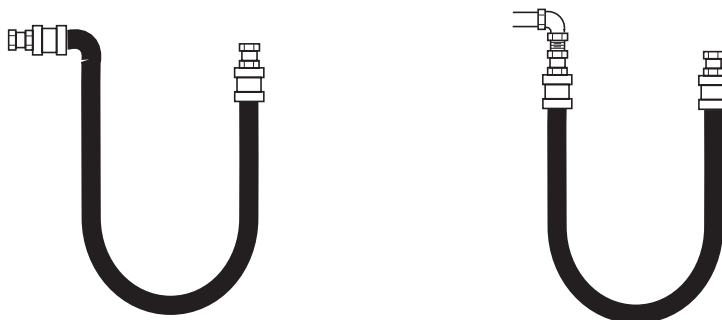
1. Check sizes and quantity of hose assemblies as shown on submittal drawing.
2. Connect all hose assemblies to the appropriate equipment as shown on submittal drawing. Provide and install necessary plumbing fittings to present a neat appearance and to ensure that hose assemblies do not touch floor.
3. To ensure proper installation and minimal wear of hoses, follow the examples shown below:

Do not offset couplings, this creates torsional twisting and undue strain causing premature failure.



Couplings and hose should be installed in the same plane as shown.

Allowing a sharp bend strains and twists the metal hose to a point of early failure at the coupling.



This is the correct way to install metal hose for vertical traverse. Note the single natural loop.

Closing in the diameter at the coupling creates double bends causing work fatigue failure of the fittings.



Maintain the minimum or larger bending diameter between the couplings for longest life.

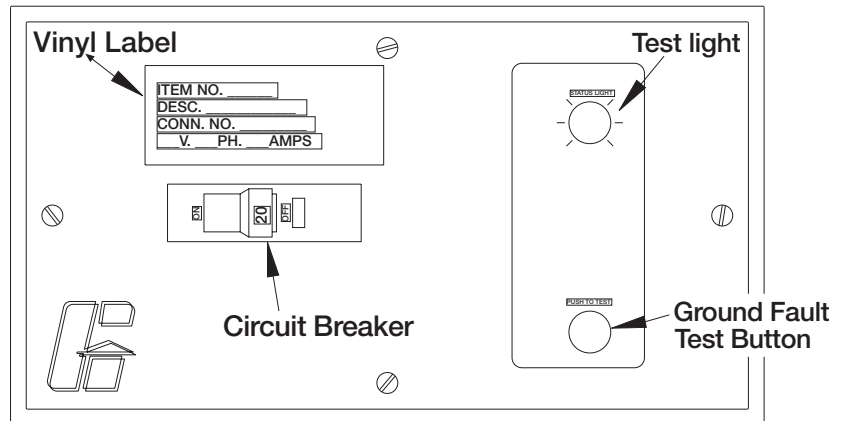
GROUND FAULT ELECTRICAL CONNECTION PLATE (OPTIONAL)

Operating Instructions

1. Turn all individual equipment controls to the OFF position before attempting to connect or disconnect any cord and plug assembly. After the cord and plug assembly is connected, equipment may be turned ON.
2. The Greenheck ground fault electrical connection plate consists of the following:

- a. Point-of-use circuit breaker.
- b. Power sensitive ground fault relay
- c. Push to test button
- d. Green LED

3. When the circuit breaker is in the OFF position, the LED is not illuminated. To energize the outlet, turn the circuit breaker to the ON position. The LED will turn on.



NOTE: Upon initial start-up, the circuit breakers may occasionally require a "break-in" procedure. Turn the circuit breakers OFF and ON several times.

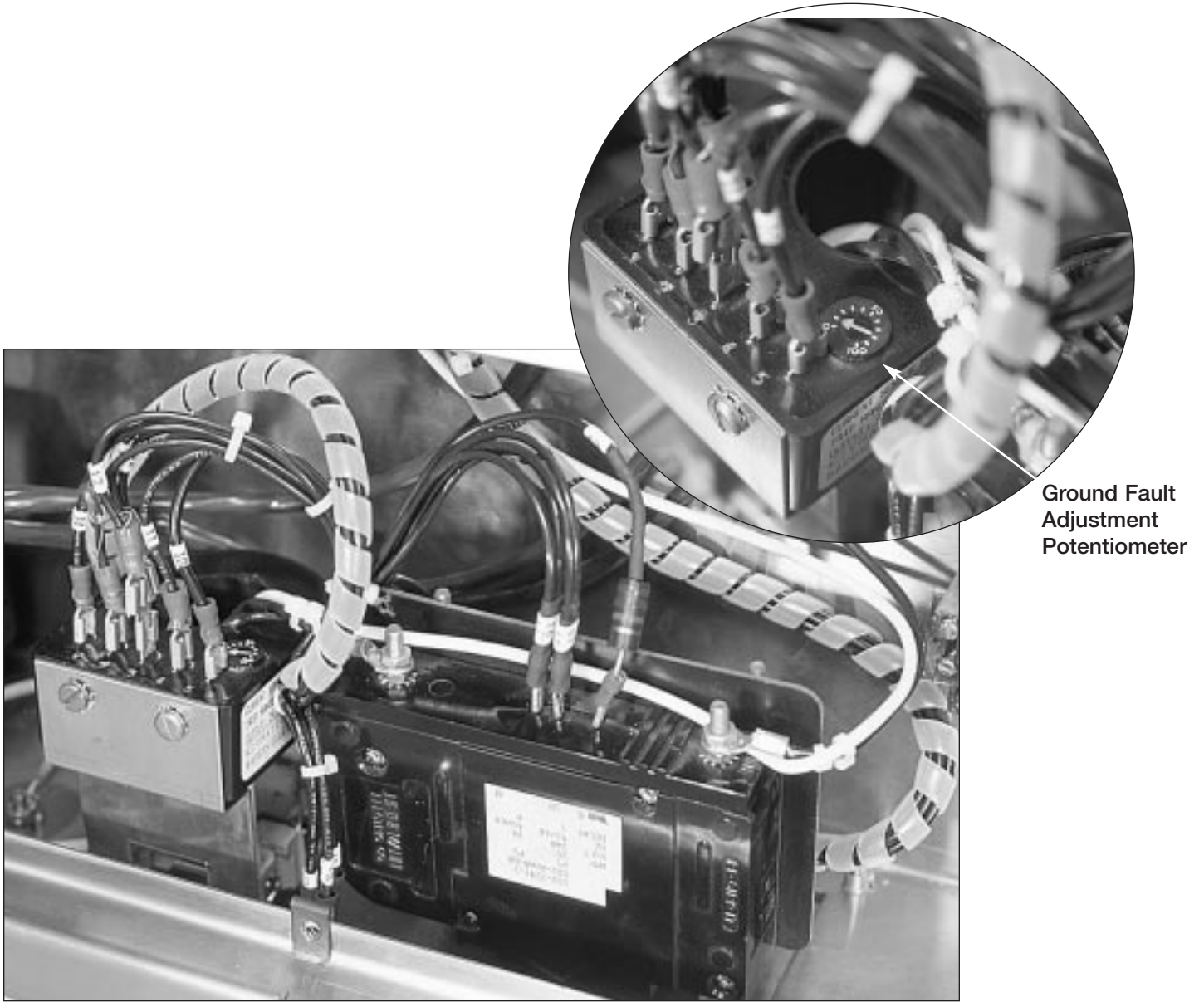
4. To test the connection plate, turn the circuit breaker to the ON position and press the PUSH TO TEST button. The circuit breaker will automatically turn to the OFF position and the outlet will be de-energized.
5. Turn the circuit breaker back to the ON position and the outlet will be energized. The equipment is now ready for operation.

NOTE: Ground fault nuisance tripping may occur on certain pieces of equipment. If this situation occurs, follow these steps:

- a. CAUTION -- Turn all main services to the raceway OFF.
- b. Carefully remove the two screws securing the long access panel. Tilt the access panel down until the restraining chain holds the panel in the OPEN position.
- c. Locate the Greenheck ground fault sensing relay and adjust the potentiometer slightly clockwise. **Please see the diagram on Page 10.**
- d. Carefully replace the connection plate in the unit and tighten securely.
- e. Repeat steps 3 and 4.

NOTE: If tripping continues, the piece of equipment which is connected to the plate assembly must be thoroughly checked-out.

POWER SENSITIVE GROUND FAULT RELAY



FIRE FUEL SHUT-OFF (OPTIONAL)

Operating Instructions

A. Electric

Actuation of the fire control system per the submittal drawing will trip all circuit breakers and controls equipped with the fire-fuel shut-off feature and deenergize the corresponding outlets. After the fire control system is returned to normal operating conditions, these circuit breakers will be de-energized until the circuit breakers are reset.

B. Gas

Actuation of the fire control system per the submittal drawing will stop all gas flow to the gas operated equipment. After the fire control system is returned to normal operating conditions, the button marked gas reset must be pressed. This will reset the gas system and gas will flow to all gas operated equipment.

IMPORTANT NOTE: After the gas system has been reset, all pilot lights must be re-lit.

Gas 5-Second Delay (Optional)

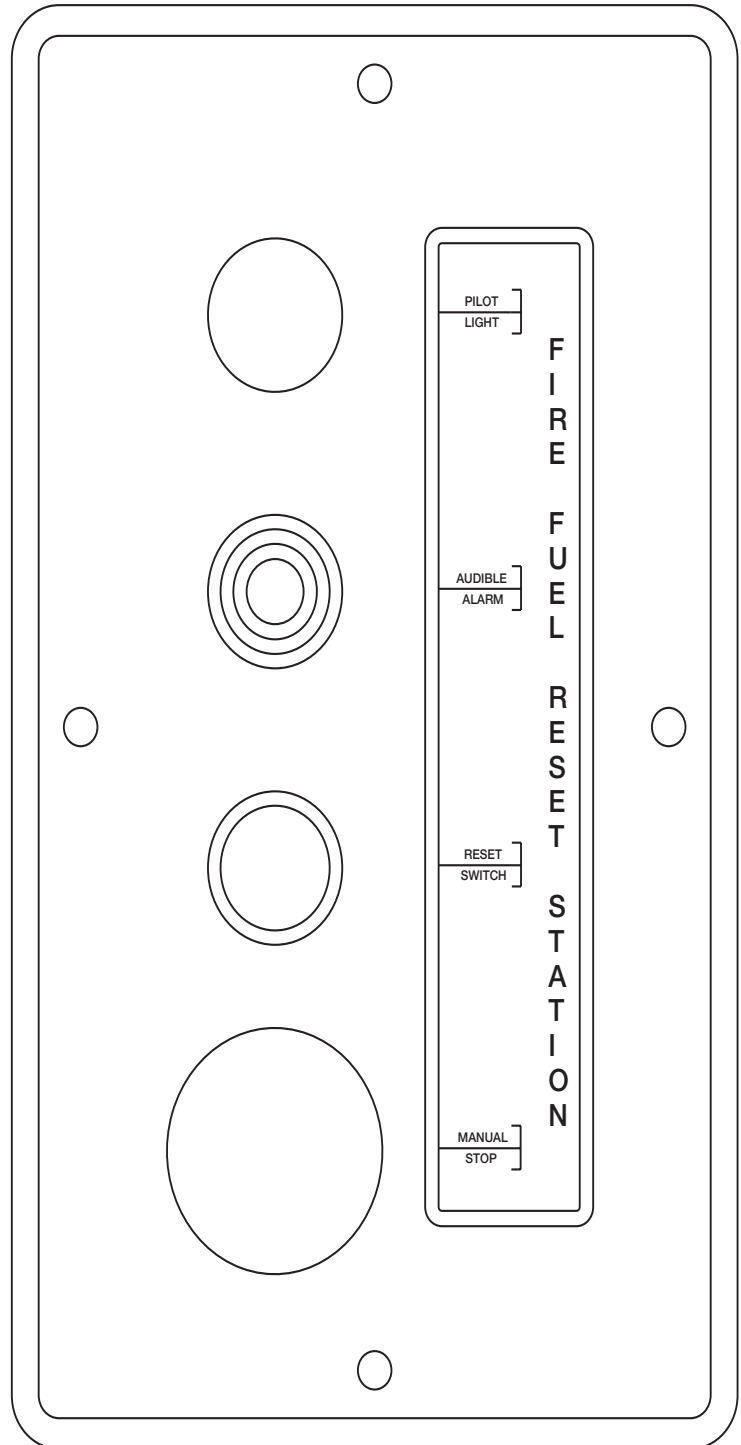
This system is identical to the system explained above; however, the gas system will shut off in 5 seconds after the fire fuel system is actuated. This system will prevent nuisance pilot outages due to the instantaneous power interruptions. With this option, a GAS-OFF light and horn is supplied.

Remote Status Indicator Lights (Optional)

These lights are located remotely from each Greenheck connection plate; however, they are interconnected to each connection plate and show circuit breaker ON or OFF status.

Ventilator Light Switch (Optional)

The ventilator light switch is located on the control panel. Be sure that the ventilator light switch circuit breaker, which is located next to the light switch, is in the ON position.



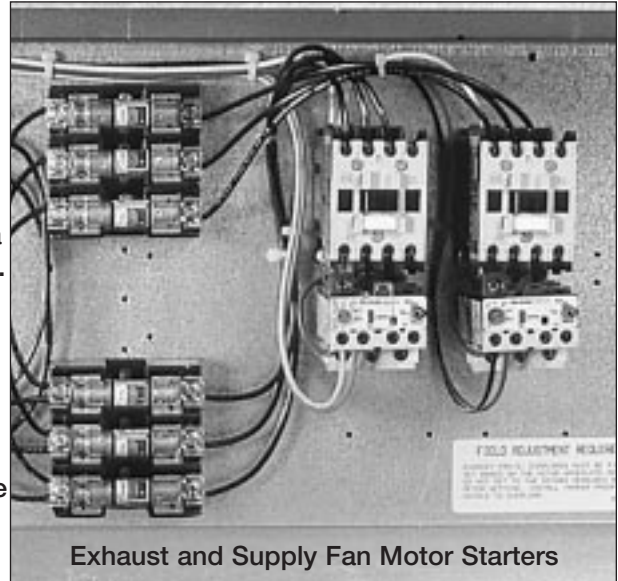
EXHAUST FAN MOTOR CONTROLS (OPTIONAL)

Each unit may have any combination of the following controls, with each control labeled for its function:

1. Exhaust Fan Stop - Stops the exhaust fan motor.
2. Exhaust Fan Start - Starts the exhaust fan motor.
3. Exhaust Fan On - Lit when the exhaust fan motor is on.
4. Time Delay On - If supplied, upon pressing the Exhaust Fan Stop, the exhaust fan motor will continue to run for a certain time period, during this period, this light will be lit.

The above time delay is adjustable from 5 minutes to 2 hours. To adjust the time delay, follow these steps:

- a. Remove the screws which hold the ventilator control panel on the unit.
 - b. Behind the panel is a timer with an adjustable knob. Turn this knob clockwise to increase the time delay or counter clockwise to decrease the time delay.
 - c. Replace the ventilator control panel and tighten screws securely.
5. Reset - If supplied, pressing this button will reset the exhaust fan motor starter overload.
 6. Fan Malfunction - If supplied, this light and horn will activate if the exhaust fan motor starter overload is activated.
 7. Low Detergent - If a ventilator water wash system is supplied, light will be on if the detergent tank needs replenishing.
 8. Water Wash Start - If a ventilator water wash system is supplied, this button will activate it.
 9. Water Wash On - If supplied, light will be on when the water system is on.



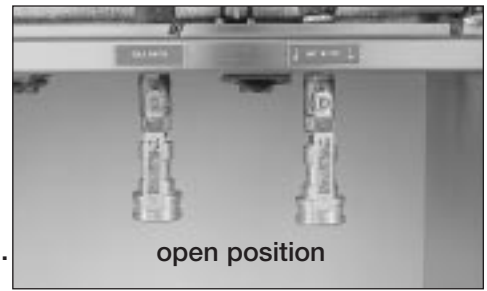
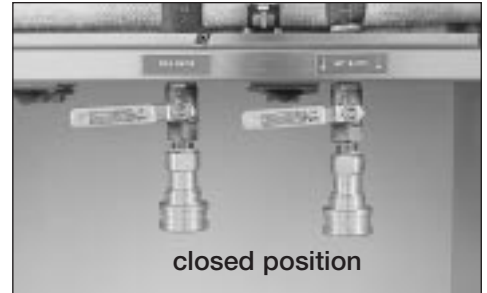
EMERGENCY STOP

Depressing this switch will trip all circuit breakers de-energizing all outlets, and stop all gas flow to gas operated equipment. To reset, push the reset button. All circuit breakers must then be reset to re-energize the outlets. **IMPORTANT NOTE: After the gas system has been reset, all pilot lights must be re-lit.**

GENERAL PLUMBING OPERATING INSTRUCTIONS

1. Open and close position of quarter turn ball valve.
 2. To operate quick disconnects:
To connect, merely pull back sleeve, and push plug into socket. To disconnect, pull back sleeve, unlocking coupling.
 3. **CAUTION!** Do not place hands on or near steam piping without proper protection.
 4. To clean behind equipment:
 - a. Pull out all equipment to be cleansed.
 - b. Disconnect all hose and cord assemblies
- NOTE:** All branch connections that have quarter turn ball valves should be turned off before disengaging hoses.

- c. Wipe down top of raceway to prevent dust build-up.
- d. Wipe off condensate from water and steam hoses, if any.
- e. Reconnect all hose and cord assemblies.
- f. Turn on all quarter turn ball valves slowly to the open position.
- g. Set equipment back in place.



SPECIFY GREENHECK

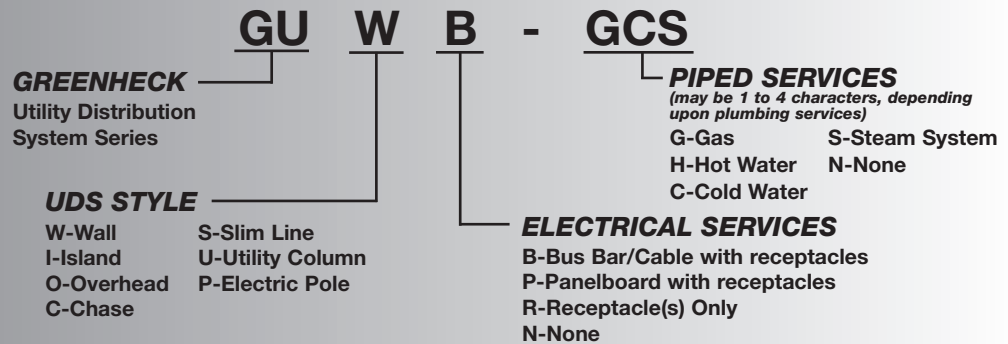
FOR THE PERFORMANCE YOU EXPECT, AND THE QUALITY YOU DESERVE!

Greenheck Utility Distribution Systems are engineered, tested, and built using the latest technology and fabrication techniques, delivering the highest quality products in the industry. Every Greenheck UDS is UL Listed, complies with all applicable codes and standards, and is manufactured at the same facility as the ventilator(s) to assure proper fit and function.

Greenheck Utility Distribution Systems are available in a variety of styles, including Wall, Island, Overhead, Utility Column, Utility Chase, and Electric Pole. Our "Slim Line" units are smaller, limited versions of our Wall or Island models, intended for your budget sensitive projects. Greenheck offers both traditional Bus Bar and Panelboard electrical distribution models, and can handle any plumbing combination of Gas, Water, and Steam.

Model Code

The model (example) reflects a Greenheck UDS, Wall Style Unit, Bus Bar electrical distribution, with Gas, Cold Water, and Steam piping.



Warranty

Greenheck warrants this equipment to be free from defects in material and workmanship for a period of one year from the purchase date. Any units or parts which prove defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid.

Due to continuing research, Greenheck reserves the right to change specifications without notice.

Complete Kitchen Ventilation Systems



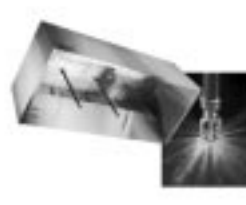
Exhaust Hoods



Exhaust Fans



Make-Up Air Units



Fire Suppression



Utility Distribution

Visit the **Greenheck website** for the most current information available
www.greenheck.com

Greenheck • P.O. Box 410 • Schofield, WI 54476-0410 • Phone (715) 359-6171 • Fax (715) 355-2399 • www.greenheck.com