

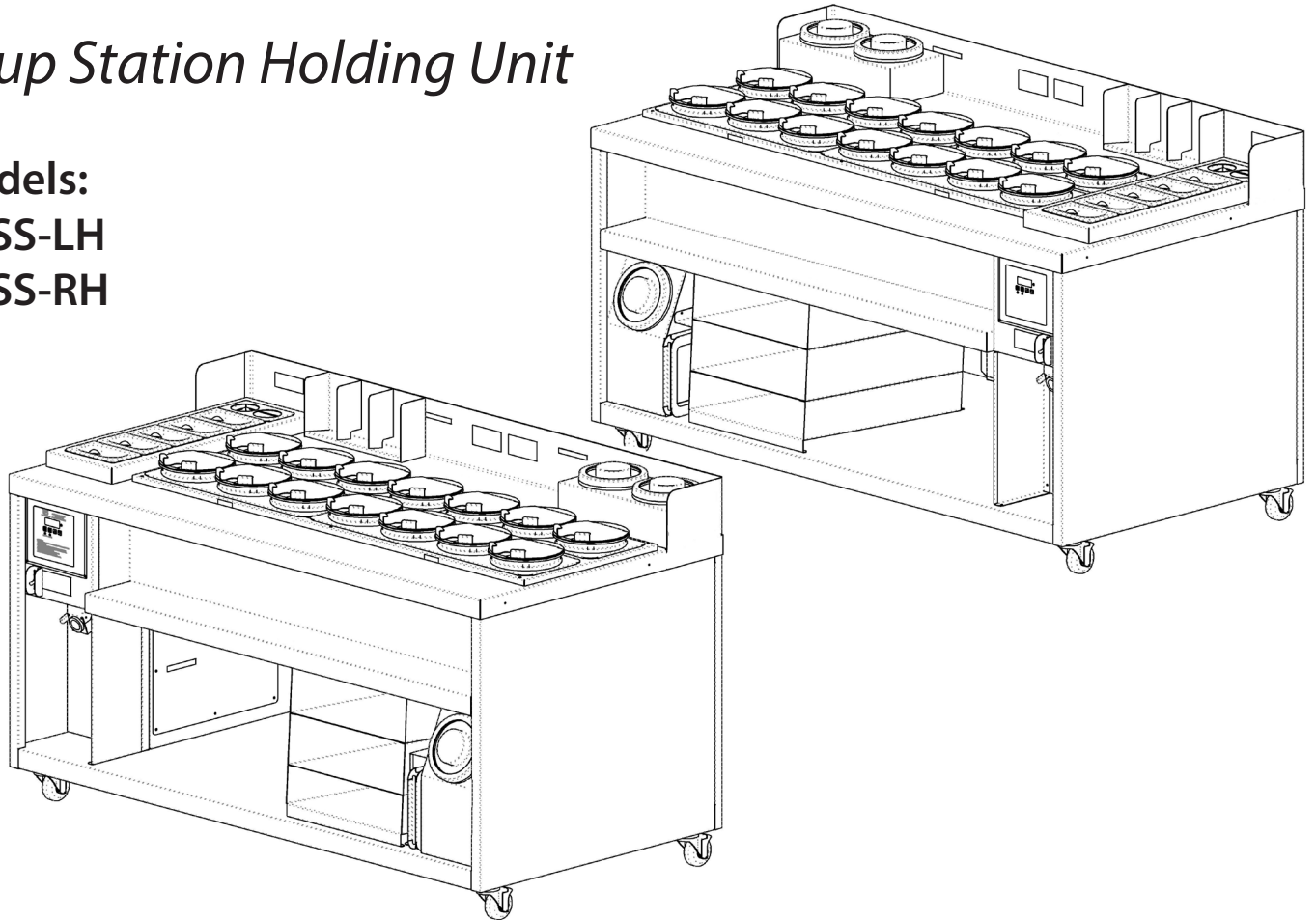


Your Solutions Partner

Installation and Operation Manual

Soup Station Holding Unit

Models:
HCSS-LH
HCSS-RH



CAUTION: Please read this manual completely before attempting to install, operate or service this equipment

U.S. and Foreign Patents Pending

*This manual is Copyright © 2017 Duke Manufacturing Co. All rights reserved.
Reproduction without written permission is prohibited. Duke is a registered
trademark of the Duke Manufacturing Co.*

Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074
www.dukemfg.com

P/N 229083
REV B 10/25/2017

TABLE OF CONTENTS

Important Safety Instructions..... 2-3

Manufacturer’s Introduction 4

Unpacking Units 4

HCSS Specification Sheet..... 5

Installation Instructions 6

General Instructions 6

Operating Instructions 6

Operating Checklist and Cleaning Guide 7

Troubleshooting 8

Control..... 9

Service Parts and Illustrations 10

Wiring Layout for Relay Box Connection..... 12

Control Wiring Schematic..... 13

Operator Replacement Parts..... 14

For Customer Assistance 15

IMPORTANT SAFETY INSTRUCTIONS

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.



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



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



Indicates Important Information



Indicates electrical shock hazard which, if not avoided, could result in death or serious injury and/or equipment damage.



Indicates hot surface which, if not avoided, could result in minor or moderate injury.



Electrical shock hazard. Do not wash with water jet or hose.



Your Solutions Partner

In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord onnector. Do not attempt to remove or disconnect the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual.
- Do not use corrosive chemicals in this equipment.
- Do not use caustic cleaners, acids, ammonia products or abrasive cleaners or abrasive cloths. These can damage the stainless steel and plastic surfaces.
- Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This equipment shall be serviced by qualified personnel only. Contact the nearest Duke authorized service facility for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.
- If the supply cord is damaged, it must be replaced by a special cord assembly available from Duke Manufacturing Co. or its service agent.

Note: Refer to the specifications data plate when ordering or replacing a cord set.

The following warnings and cautions appear throughout this manual and shall be carefully observed.

- Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.
- The procedures in this manual may include the use of chemical products. You must read the Material Safety Data Sheets before using any of these products.
- The unit shall be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with dedicated electrical lines, protected by fuses or circuit breaker of the proper rating, in accordance with all applicable regulations.
- Disposal of the unit must be in accordance with local environmental codes and/or any other applicable codes.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- CAUTION: Never use a high-pressure water wash for this cleaning procedure as water can damage electrical components



Manufacturer's Introduction

The Duke Dry Channel Holding Technology was developed to provide the market with a more efficient method of keeping food warm. This equipment uses electronically controlled heaters to warm aluminum channels to a user programmable temperature. Advantages over steam tables include lower energy and maintenance costs.

Unpacking Unit:

- Inspect the shipping carton and/or container, carefully noting any exterior damage on the delivery receipt, which must also be signed by the driver/delivery person.
- Unpack and inspect for any damage, which was not evident on the outside of the shipping container (concealed damage). Contact the carrier immediately and file a damage claim with them. Save all packing materials when filing a claim. Freight damage claims are the responsibility of the purchaser and are not covered by the warranty.
- Do not attempt to use the unit if damaged.

NOTE: If unit has been stored in extremely cold area, wait a few hours before connecting power.

CAUTION

**Never pour water into wells.
This unit is designed for dry heating only.**

Supplier Name: Duke Manufacturing Co.
Address: 2305 N. Broadway
St. Louis, MO 63102

Model #: HCSS-LH
HCSS-RH

Serial #: _____

Date Received: _____

Date Installed: _____

Telephone: (800) 735-DUKE (3853)
(314) 231-1130

Fax: (314) 231-5074

Service Referral #:

Local Service Name

Local Service #

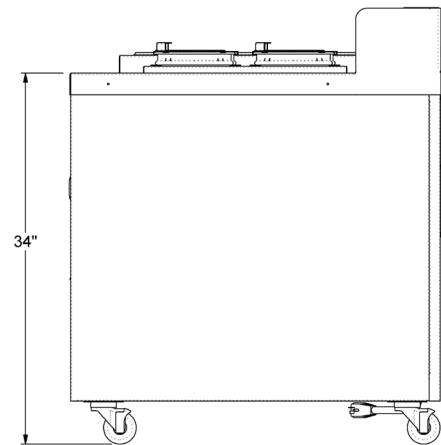
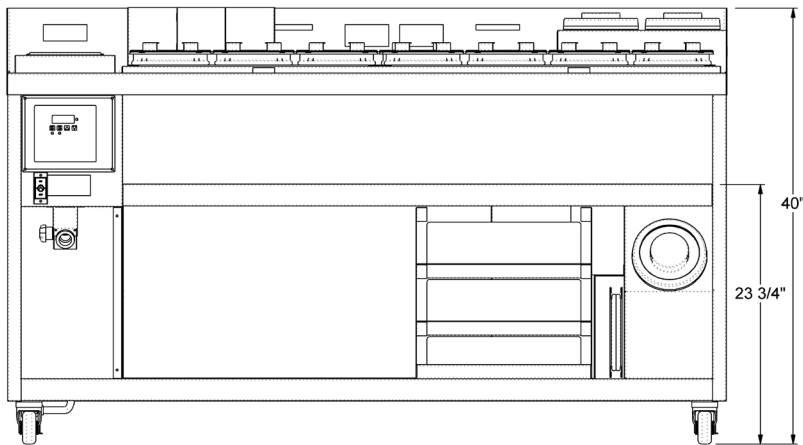
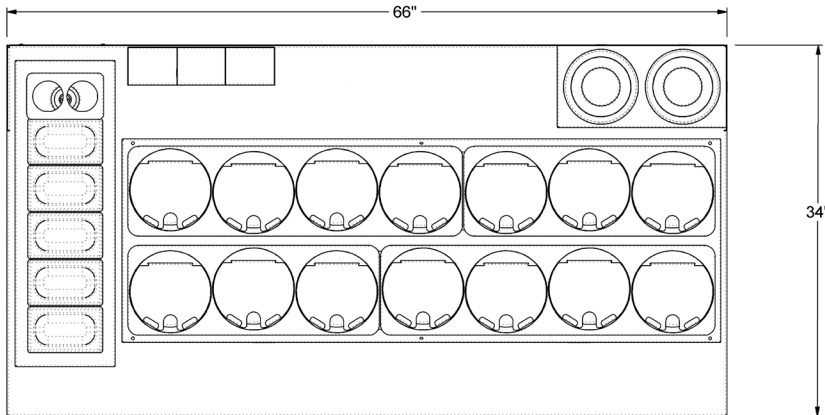
Installation requirements

Spacing Requirements: None



HCSS Specification Sheet

Shipping Weight:	370 lbs/167 Kg	
Electrical:	HCSS-LH/HCSS-RH	208V, 11 A, 2300 W 50/60Hz, 1 Phase



Installation Instructions

1. Operating temperatures permit safe installation of this holding unit with 0" of spacing between the unit and a combustible wall or partition.
2. Do not install the holding unit near any combustible objects or surfaces affected by heat or moisture.
3. **Electrical -**
 - The voltage and wattage ratings of this holding unit are given on the device nameplate. Connect the holding unit to a circuit having a voltage similar to that stamped on the device nameplate.
 - Connections to supply line are to be made through the power cord supplied on the unit.
4. The holding unit is not fused and consequently must be connected to a fused circuit equipped with suitable disconnect means, as required by local code authorities.
5. Follow instructions in the Operators Manual PERIODIC MAINTENANCE, CHECKLIST AND CLEANING GUIDE.

General Instructions

1. All foodservice equipment should be operated by trained personnel.
2. Do not allow your customers to come in contact with any surface labeled "CAUTION HOT".
3. Never pour water into wells. This unit is designed for dry operation only.
4. Do not cook, warm or hold food directly in wells.
5. Never hold food below 150°F.
6. Always place covers on pans when not serving to prevent food from drying out and to reduce your operating costs.
7. For most efficient operation, keep empty, covered pans in each pan location during preheating and when a pan location is not in use.
8. The unit is shipped with Factory control settings that will hold soup at approximately 170° F under normal conditions.
9. The most satisfactory control settings must be determined by experience based on the nature of the foodservice and the type of operation as well as individual preference of the restaurant operator. The proper control setting necessary to keep foods at the desired temperature will vary dependent upon the frequency of turnover, size of food containers, amount of food in each container, room temperature, location of holding unit with respect to range or other heated equipment, air outlets, fans, doors and passageways.

Operating Instructions

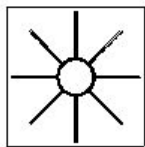
1. Place empty pans or cover the channels with lids.
2. Place the Power Switch to the ON position.
3. Push the On/Off button of the control to turn on each channel to be used.
4. Allow the Product Holding Cabinet to heat for at least 20 min.
5. Place fully warmed food into pans and place in pre-heated unit. This unit is not designed to reheat cold food product.
6. At end of day, remove all food pans and lids and turn off main power switch.
7. Clean per cleaning instructions.



Your Solutions Partner

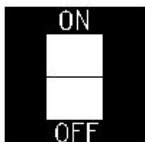
Operating Checklist and Cleaning Guide

DAILY



Opening Checklist

1. Place empty pans or cover the channels with lids.
2. Place the Power Switch to the ON position.
3. Push the On/Off button of the control for each channel.
4. Allow the Product Holding Cabinet to heat for at least 20 min.



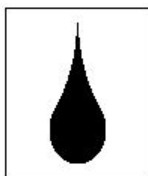
Operation Instructions/Adjustments

1. If the control displays a Heating Error it will shut down the affected well. Discontinue use of the affected well until the unit is serviced.



Closing Checklist

1. Turn power switch OFF.
2. Remove all pans and pan covers.
3. Allow unit to cool for approximately 30 minutes.
4. Clean Dry Channel Unit and Ice Pan as outlined in the Cleaning Instructions.



Cleaning Instructions

1. Turn unit off and allow unit to cool before surface cleaning.
2. Wipe down the exterior and top of the unit with warm water and mild detergent using a soft cloth or sponge.
3. Wipe down the interior of the heated Dry Channel with mild detergent and a damp sponge or soft cloth. Do not use excessive amounts of water. Do not wring water out of cleaning pads into Dry Channel. Plastic scouring pads may be used to remove baked-on food.
4. Wipe down the interior of the ice pan with water and mild detergent using a soft cloth or sponge. Rinse water may be used in the ice pan only, and removed through the drain.
5. Clean pans and pan covers using mild detergent and warm water, or in a dishwasher.

CAUTION 

Electrical shock hazard! Do not wash with water jet or hose.

Do not use caustic cleaners, acids, ammonia products or abrasive cleaners or abrasive cloths. These can damage the stainless steel, Aluminum, and plastic surfaces.



Your Solutions Partner

Troubleshooting

There are no user serviceable parts on the Duke Dry Channel Holding Unit. If a malfunction occurs, then check all switches and circuit breakers. Check rating label and confirm that unit is operating at the proper voltage. If the malfunction still exists, contact your Duke Manufacturing Company authorized service agent or call 1-800-735-3853.

Electronic Control Fault Indications

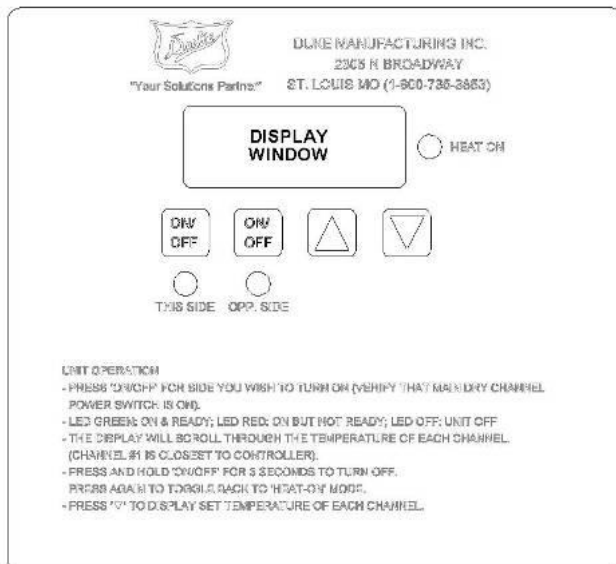
The control will display a Heating Error under certain conditions. It provides an indication to alert the operator to failures in the heater circuit. A buzzer will sound for one second every 30 seconds. The operator can cancel the alarm with the push of any button. The alarm will re-activate after twenty minutes. When a Heating Error is displayed, the affected well should not be used until a qualified service technician corrects the cause of the fault. The control will automatically shut down the affected well. The fault conditions that could cause the control to display a heating error are as follows:

- 1. Over – Temperature Fault** - An over-temperature fault occurs when the control senses that the well temperature is higher than the specified factory preset temperature. This occurs when the power is not removed from the heating element after the channel has achieved the preset temperature, causing the control to display the error "HIX" where "X" is the zone with the fault. (1 – 4). The auxiliary thermostat prevents the temperature from exceeding safe levels by regulating the temperature to a maximum of 375° F.
- 2. Under – Temperature Fault** - An under-temperature fault occurs when the control senses that the well temperature is lower than the specified factory preset temperature for more than 30 minutes continuously. This occurs when heating element circuit opens or the RTD Feedback signal is faulty. The display will read "LOX" where "X" is the zone with the fault (1 – 4).
- 3. Sensor Failure** - A temperature sensor fault occurs when the control senses a short circuit or open circuit condition in the temperature sensor circuit. The display will read "PRX" where "X" is the zone with a bad probe (1 - 4). The control will display "000" for the temperature of the channel in a fault condition.



Control

Display (pn 228881)



Control Operation

Apply power to the unit with the main dry channel power switch. Press the 'on/off' button to turn each channel on. The display will scroll through the temperature of each zone 1-4. Press and hold the 'on/off' button for 3 seconds to turn the channel off.

Control Panel

The controls for the Duke drywell maintain the temperature of the channels. Each channel has two heat zones. Zones 1 and 2 are in the channel closest to the operator. Zones 3 and 4 are in the channel furthest from the operator. The control monitors each zone's temperature and activates a relay to supply power to the heater for that zone. The display will cycle through the temperature of each zone followed by any fault messages. If the "Up" arrow is pressed, the system will cycle through the zone temperatures, displaying their actual temperatures. If the "Down" arrow is pressed, the system will cycle through the set point temperature of each zone. The "Heat On" LED will be lit to indicate whether a relay is activated for the zone being displayed, (No LED – Off; Red – Heat On; Green – Channel Ready). A fault message will be displayed to indicate any zone that does not reach the set point temperature within 45 minutes of power up. The default set point is 275 F.

CAUTION

To comply with sanitation requirements, do not set the temperature control to hold product lower than 170° F

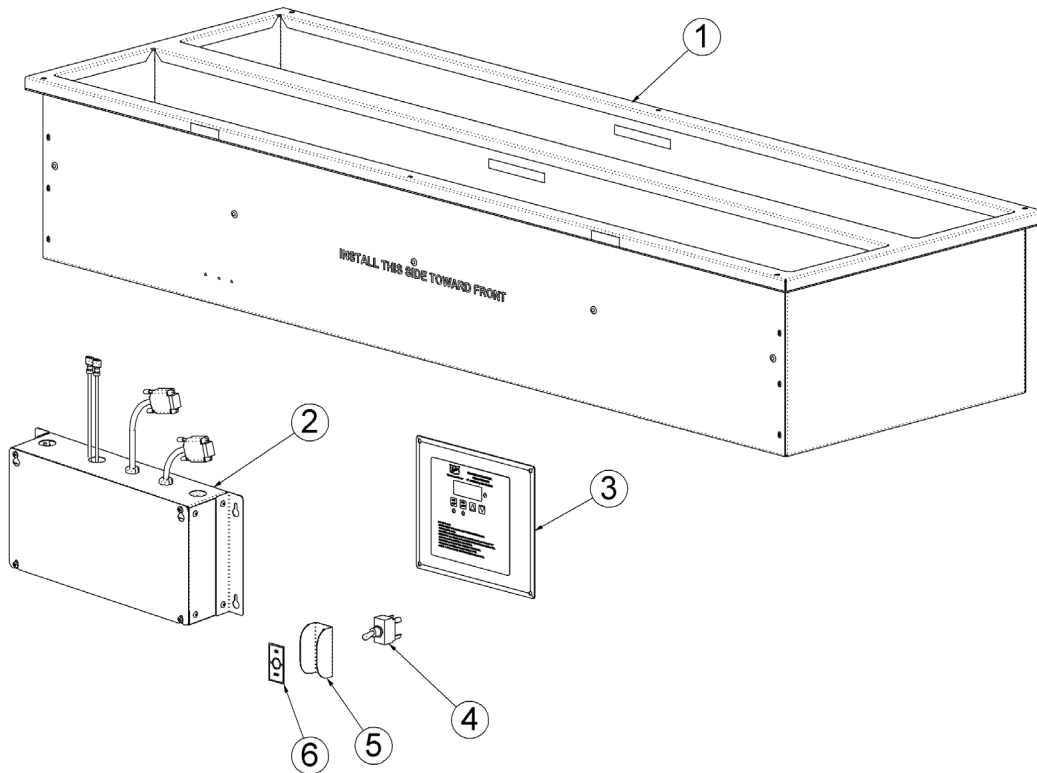
Notice: Display shows heated well surface temperature.
It does not show product temperature.



Your Solutions Partner

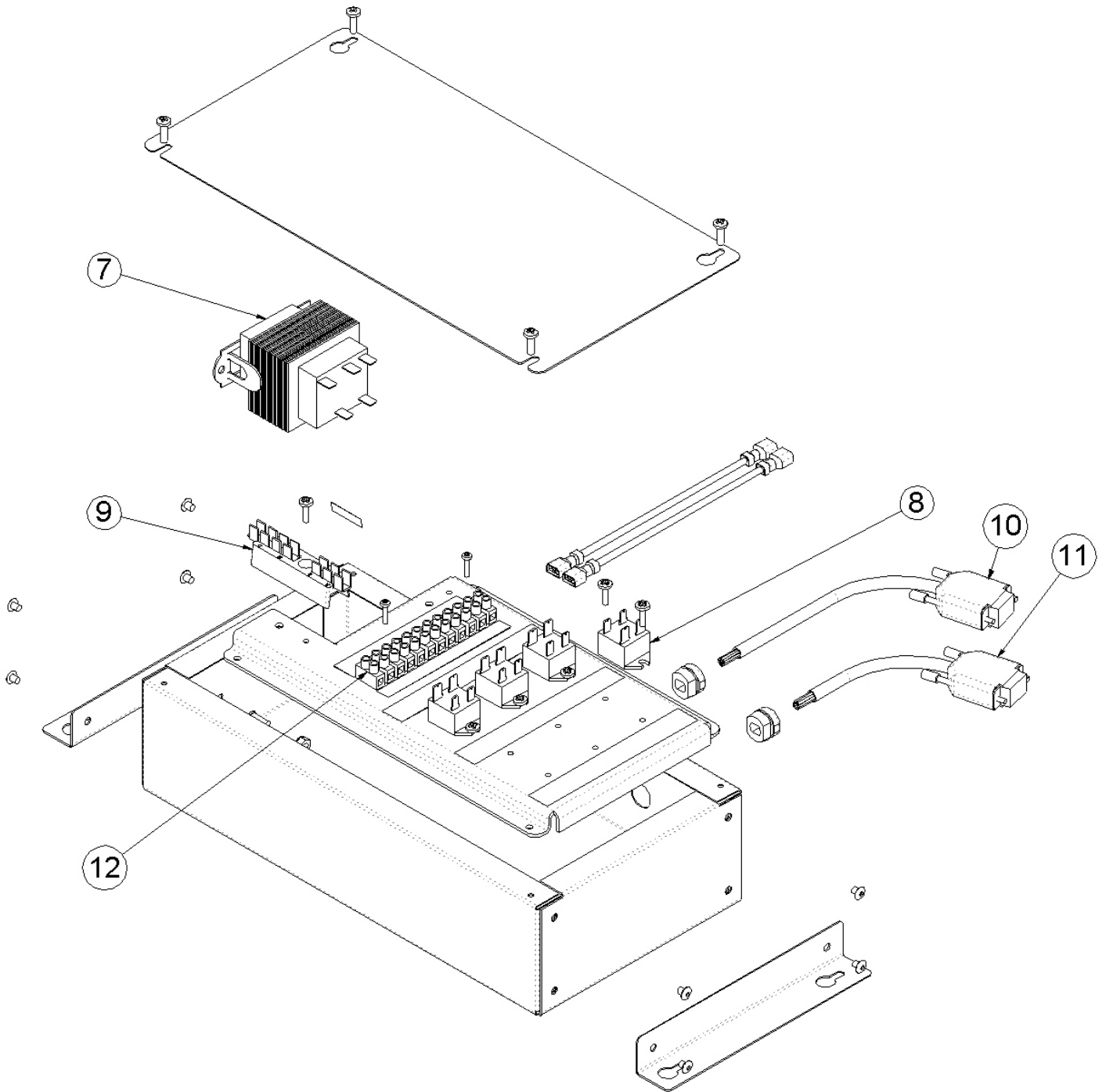
Service Parts and Illustrations

Locator	P/N	Description	Qty/Unit
1	E020259	Assy, 2 Channel Dri-Channel	1
2	520042	Assy, Box Relay HCSS	1
3	228881	Assy, Control Board Display 6-Channel	1
4	218963	Switch, Toggle NKK	1
5	520092	Guard Switch	1
6	218965	Plate, On-Off	1
7	218829	Transformer, 208/240P 24SE Tyco #3-1611450-4	1
8	218828	Relay, Mini NO 20A 280/24V	6
9	218840	Terminal Block, 2 Pole	1
10	218918	Harness, HD15 for RTD's	1
11	228822	Harness, DSUB9/Relays 6-Channel	1
12	218902	Terminal Block, Ideal	1
	228500	Element 500W 208V Channel	4
	228501	Element 70W 120V Bowl Station	2
	228807	RTD Heating Element 119"	4
	228808	Hi-Limit PEPI 190C	4

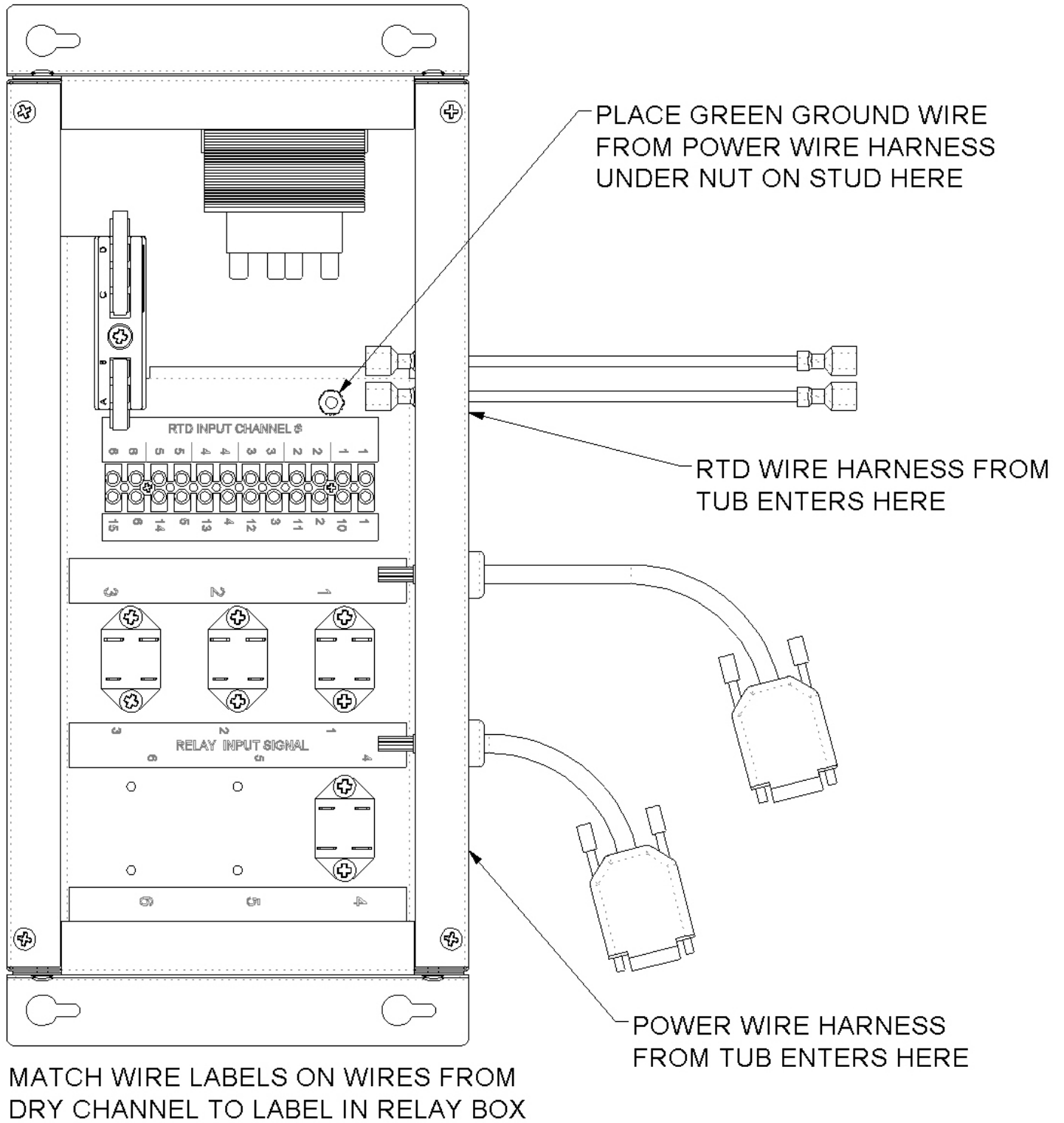


Your Solutions Partner

Control Relay Box



Wiring Layout for Relay Box Connection



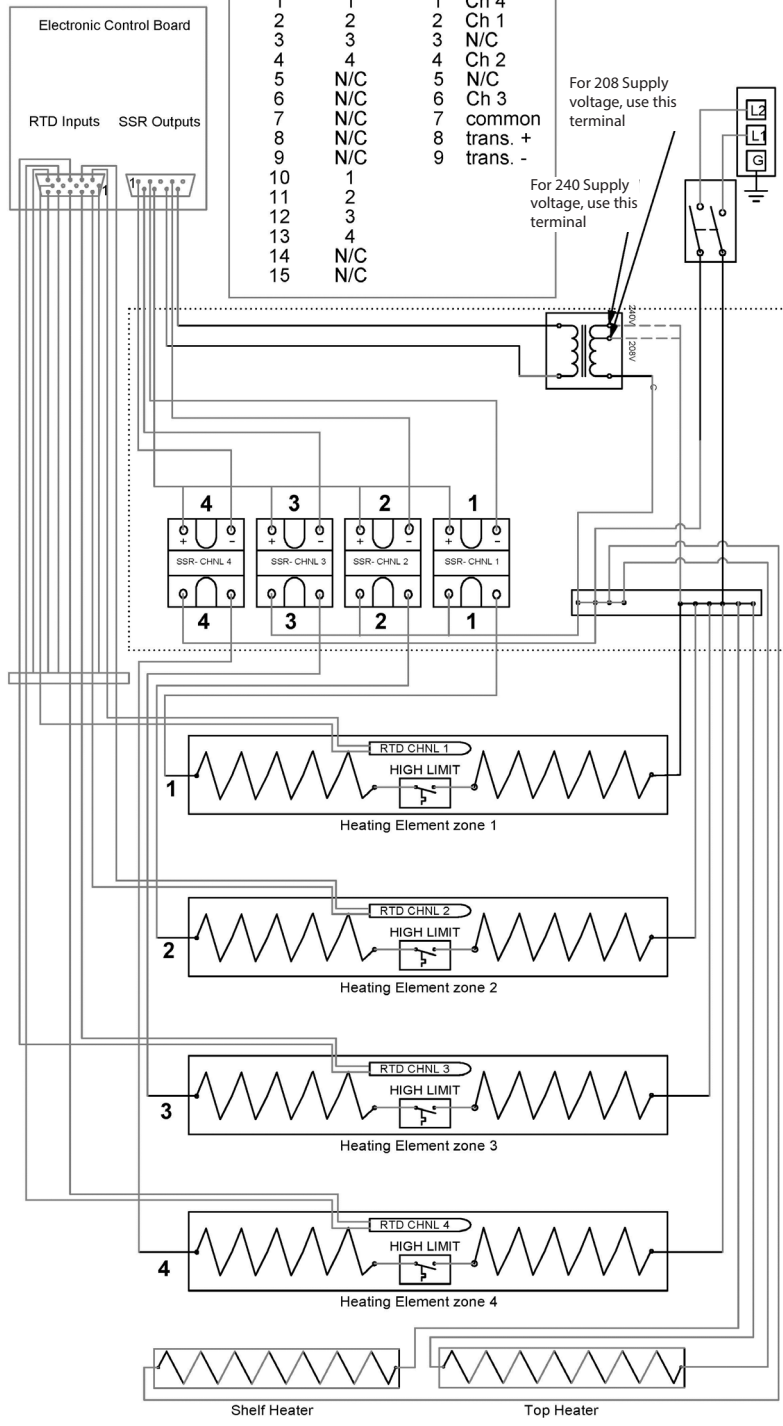
Control Wiring Schematic

DRY CHANNEL WIRING DIAGRAM

Note: 6 channel control shown Use chanel 1-4

Controller pinout information

RTD Inputs Pin #	Channel	SSR Outputs Pin #	SSR
1	1	1	Ch 4
2	2	2	Ch 1
3	3	3	N/C
4	4	4	Ch 2
5	N/C	5	N/C
6	N/C	6	Ch 3
7	N/C	7	common
8	N/C	8	trans. +
9	N/C	9	trans. -
10	1		
11	2		
12	3		
13	4		
14	N/C		
15	N/C		



229082 REV.B



Your Solutions Partner

Operator Replacement Parts

P/N	Description	Qty/Unit
E020255	Adapter Panel 3 Bain Marie	2
E020256	Adapter Panel 4 Bain Marie	2
E020285	Adapter Panel 1/3 Rectangle Pans	4
520145	Adapter Bottle Ice Pan	1
E020260	Lid Bain Marie Panera	14
520255	Ring Lid Bain Marie Panera	14
228508	Pan Bain Marie Stackable	14
2174009042	Food Pan 1/9 size 4" Deep	6
215002	Caster Wheel Locking	4
214312	Cup Dispenser	3
214317	Gasket kit (1ea, S,M,L,XL)	3
228503	Chrome Dispenser Ring (2/pk)	1.5
218964	Boot, Toggle Switch, Splash Proof (Optional)	1



Your Solutions Partner

For Customer Assistance

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____	SERIAL NUMBER _____
DATE OF PURCHASE _____	
DEALER _____	TELEPHONE _____
SERVICER _____	TELEPHONE _____

TO PHONE:

Dial 1-800-735-DUKE (3853)
SERVICE
PARTS
ADDITIONAL CUSTOMER INFORMATION

TO WRITE:

Duke Manufacturing Co.
2305 N. Broadway
St. Louis, MO 63102

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.



Your Solutions Partner

NOTES



Your Solutions Partner

Duke Manufacturing Co.

2305 N. Broadway

St. Louis, MO 63102

Phone: 314-231-1130

Toll Free: 1-800-735-3853

Fax: 314-231-5074

www.dukemfg.com