E-MAIL 1

Duke Manufacturing Co. EX1033
U.S. Patent No. 10,492,641

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 11/6/2013 3:27:54 PM
To: Joe Preis (Joseph.f.Preis@wawa.com) [Joseph.f.Preis@wawa.com]
CC: Niki Arakelian [niki@coolersolutions.com]; Allison Bodzioch (allisonb@nordoninc.com) [allisonb@nordoninc.com]; Greg Hake [ghake@dukemfg.com]
Subject: IRHS-23-208 New Electrical Specifications
Attachments: IRHS2.pdf

Joe –

Here are the new specifications. Please note that Duke was able to reduce the energy consumption of these units.

7.2 amps on a 15 amp circuit
6-15P plug

I have attached a spec sheet for your reference.

I will work with the team on getting Wawa a unit of the latest design.

Thank you, Joe.

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM



WWW.DUKEMFG.COM

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Specifications

F.O.B Sedalia, Missouri 65302



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

AGENCY LISTING:

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
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- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

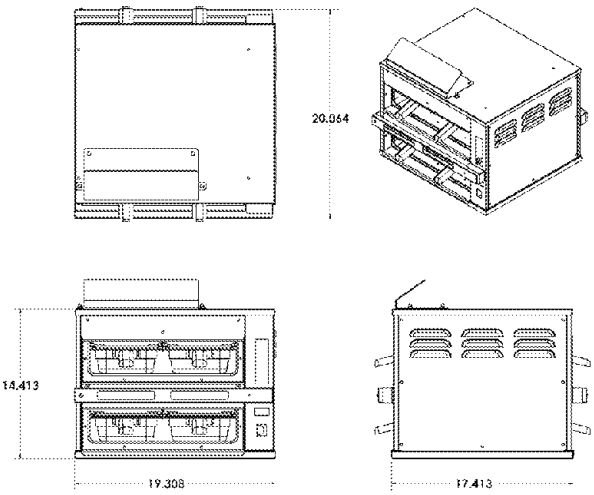
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Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

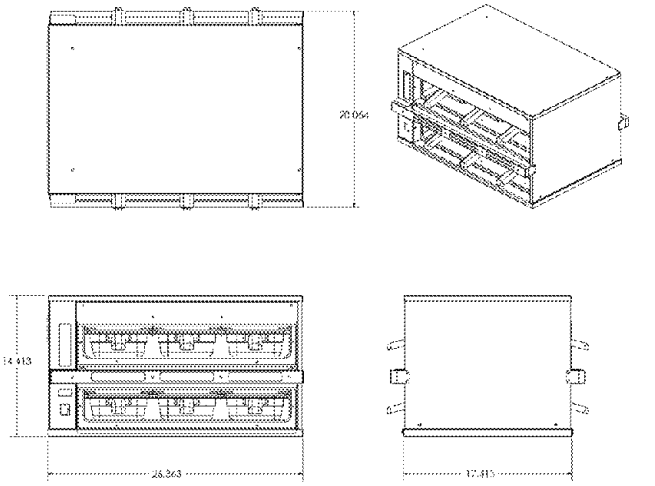
DRAFT

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS: FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
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E-MAIL 2

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 11/19/2013 2:29:35 PM
To: Joe Preis (Joseph.f.Preis@wawa.com) [Joseph.f.Preis@wawa.com]
CC: Greg Hake [ghake@dukemfg.com]; Bob Booker [bbooker@dukemfg.com]
Subject: Duke IRHS Pricing for Wawa - 11-19-13
Attachments: IRHS2.pdf

Joe –

Here is the pricing for the Duke IRHS:

IRHS-22
Two Wide by Two High
SINGLE SIDED TIMER BARS
Includes:
Two (2) Lids
Four (4) Metal Trivets
One (1) USB stick
$2850

IRHS-22
Two Wide by Two High
DUAL SIDED TIMER BARS
Includes:
Two (2) Lids
Four (4) Metal Trivets
One (1) USB stick
$3300

IRHS-23
Three Wide by Two High
SINGLE SIDED TIMER BARS
Includes:
Four (4) Lids
Six (6) Metal Trivets
One (1) USB stick
$3525

IRHS-23
Three Wide by Two High
DUAL SIDED TIMER BARS
Includes:
Four (4) Lids
Six (6) Metal Trivets
One (1) USB stick
$4200

IRHS-24
Four Wide by Two High
SINGLE SIDED TIMER BARS
Includes:

Six (6) Lids
Two (2) Metal Trivets
One (1) USB stick
$4250

IRHS-24
Four Wide by Two High
DUAL SIDED TIMER BARS
Includes:
Six (6) Lids
Two (2) Metal Trivets
One (1) USB stick
$5050

Accessories
Metal Trivets = $10.25
Metal Lids = $26.00

All units are equipped with a one year parts and labor warranty and also includes support on the programming web site

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
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Specifications

F.O.B Sedalia, Missouri 65302

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PRODUCT INFORMATION:

PROJECT: _____

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QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
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MODEL:

Product Holding Unit - Infra Red Heat Sink

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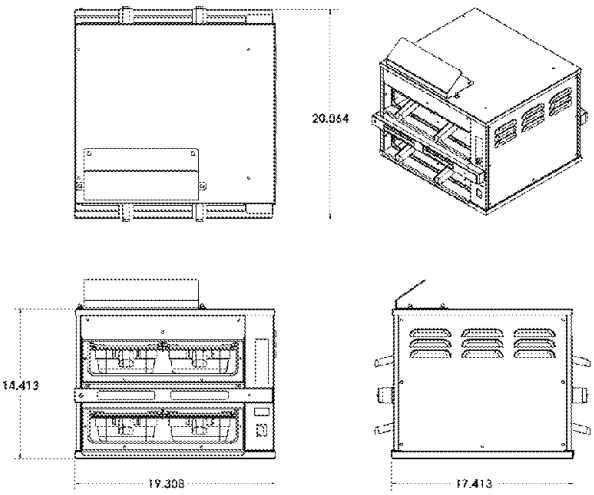
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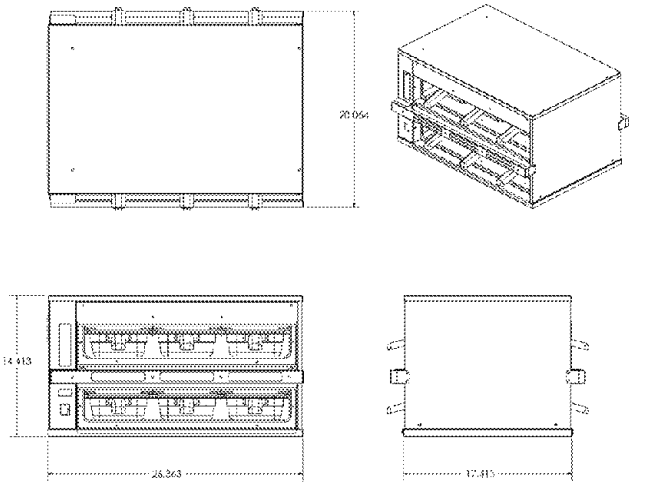
DRAFT

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IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
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ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
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E-MAIL 3

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 12/3/2013 4:29:36 PM
To: Shilo Morin (Shilo.Morin@jackinthebox.com) [Shilo.Morin@jackinthebox.com]
CC: Mark Micallef [mark@lund-iorio.com]
Subject: RE: Duke Infrared Holding Cabinet
Attachments: Duke IRHS Spec Sheet.pdf; Duke IRHS Marketing Flyer.pdf; 229945 Duke Manual IRHS.PDF

Shilo –

Mark and I talked about this project this morning so I wanted to provide you an update on the Duke Infrared Heat Sink holding unit.

The product line was recently released in September 2013 so full production models are now available. The units currently available are listed on the spec sheet (Duke IRHS Spec Sheet.pdf) on which all the dimensions and electrical specifications can be found. The only eight slot unit that is in production is the IRHS-24, which is two high by four wide, measuring a little over 33" wide.

The unit that you have in your test kitchen is a prototype and is no longer supported by Duke's programming web site so we will need to replace that unit soon.

Before Adam left, we made some promising progress at extending holding times of the fried products, especially the chicken patties. We look forward to talking with you more about this project next week.

Thank you.

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM



WWW.DUKEMFG.COM

From: Mark Micallef [mailto:mark@lund-iorio.com]
Sent: Monday, December 02, 2013 10:57 AM
To: John Ulrich
Subject: FW: Duke Infrared Holding Cabinet

FYI....it seems like that IRHU unit is coming back on line.....

We have a lot to do next week in those two days! Looking forward to it sir.

From: Shilo Morin [mailto:Shilo.Morin@jackinthebox.com]
Sent: Monday, December 02, 2013 8:55 AM

To: Mark Micallef
Subject: RE: Duke Infrared Holding Cabinet

That will work great for me. Thank you.

Shilo Morin
Project Manager
Operations Support
Jack in the Box, Inc.
858.571.2168
shilo.morin@jackinthebox.com

-------- Original message --------
From: Mark Micallef
Date:12/02/2013 8:52 AM (GMT-08:00)
To: Shilo Morin
Subject: RE: Duke Infrared Holding Cabinet

Hi Shilo,

Can we simply discuss next week when John will be at JIB with me to meet and test new items? 10th and 11th? If you need sooner, I can get you something. Let me know.

Thanks,
Mark.

From: Shilo Morin [mailto:Shilo.Morin@jackinthebox.com]
Sent: Monday, December 02, 2013 8:43 AM
To: Mark Micallef
Subject: Duke Infrared Holding Cabinet

Hello Mark,

I know we have been sitting on the Duke Infrared holding cabinet and I am wondering if you know where Adam last left off on it. Are you able to send me some information on the cabinet? Is this already on the market or is this this a prototype unit? Do we have the latest iteration of the infrared cabinet? Please let me know and hopefully we can make a case to dedicate some resources towards the cabinet.

Thank You,

Shilo Morin
Project Manager
Operations Support
Jack in the Box, Inc.
858.571.2168
shilo.morin@jackinthebox.com

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

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QUANTITY: _____

MODEL:

Product Holding Unit - Infra Red Heat Sink

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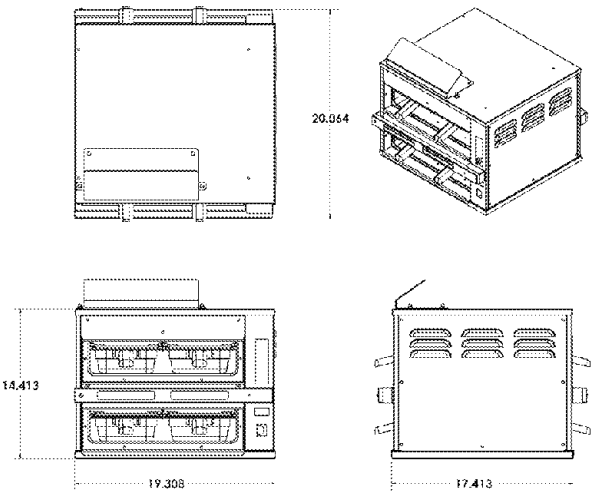
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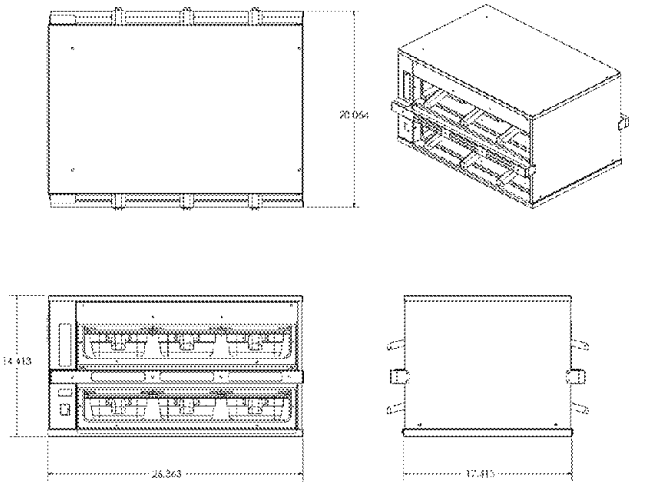
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IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
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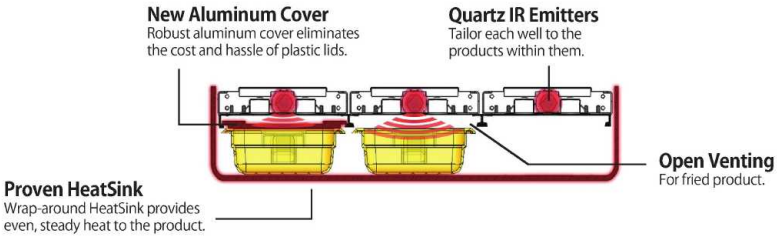
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Turbo Boost your product temperatures and your profits.



Technology – for consistently HOT product.
- Dual holding technologies, InfraRed and HeatSink, built to last with a heavy, durable construction
- Prevent grease migration and performance degradation with a solid-state, fanless design, extended HeatSink and fully sealed cavity with no openings
- Heavy, robust individual aluminum covers with better heat transfer and greater seal assurance; critical to maintain food quality with extended hold times
- Utilize "Turbo Boost" for an instant shot of heat to boost food temperature for hot, consistent food
- Robust timer bars with a proven track record
- Improve operations with more product information at each well
- Quickly and easily load new menu sets via USB
- Eliminate faceplate cracks with new stainless faceplate

Profit
- Drastic improvement in food temperatures- always hot, always consistent
- Unlimited flexibility for current and future menu.
- Hold any food item in any well, knowing that it is in an optimized holding environment tailored to that product
- Significantly extended hold times across the menu, including fried foods
- Energy efficient technology that utilizes idle mode and does not force hot air into kitchen
- Roll out future menu items and LTO's seamlessly without requiring new or specialized holding equipment

Kitchen Integration
- Web programming to quickly and easily customize configurations
- Connect to your kitchen management system
- Reduced footprint allows IRHS to fit into smaller spaces
- Plug-and-play electric configurations means the IRHS can replace your old PHU without new wiring
- Enhance your overall restaurant performance, improve GUESTTRAC Score and Speed of Service times

Eliminate Temperature Differential



OLD: HeatSink™ Only **NEW:** HeatSink™ and InfraRed



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OPERATORS MANUAL

INFRA RED HEAT SINK ™ HOLDING UNIT

MODELS

IRHS-22
IRHS-23
IRHS-24
IRHS-34

IMPORTANT INFORMATION, READ BEFORE USE.
PLEASE SAVE THESE INSTRUCTIONS.

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Duke Manufacturing Company

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Toll Free: 1-800-735-3853
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www.dukemfg.com

P/N 229945
DRAFT

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MANUFACTURER'S INTRODUCTION

The IRHS Holding Unit was developed specifically to address the needs of Burger King restaurant operations and profitability. Extended hold times with improved food quality and consistency were achieved through the innovative combination of two proven, patented Duke technologies: Infra Red and Heat Sink. This new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product. This gives you the ability to maintain gold standard sensory attributes at drastically extended hold times while delivering hotter food to your customers.

In addition to providing the most robust and reliable solution technically possible, we also made the following improvements from the previous FWM PHU model:

- Eliminated plastic lids and replaced with a robust aluminum Heat Sink Cover for broiled foods
- Eliminated grease migration concerns
- Eliminated plastic faceplate and plastic lid capture system
- Changed to a more robust Duke timer bar and control system

Throughout this manual, you will uncover more details about the benefits and advantages that the Duke IRHS will bring to your restaurant. Thank you for your purchase and as always, your feedback is appreciated.

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.

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

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

CAUTION **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.**

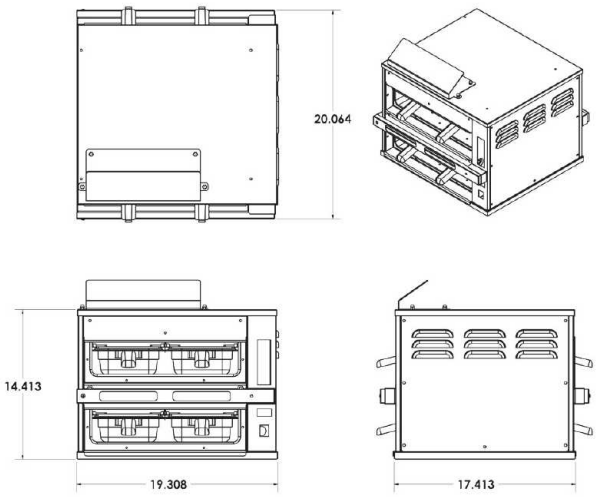
In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to defeat 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 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 should 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.

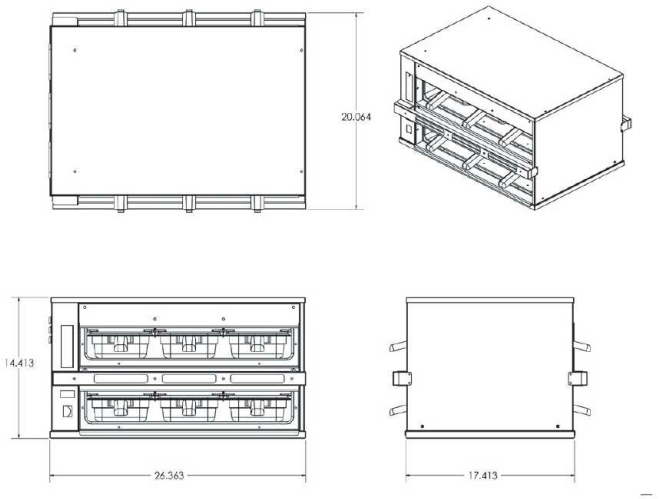
The following warnings and cautions appear throughout this manual and should be carefully observed.

- 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 should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.
- 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.

SPECIFICATIONS



IRHS-22



IRHS-23

DIMENSIONS: FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

INSTALLATION

UNPACKING UNIT

Inspect the shipping carton and/or container, carefully noting any exterior damage on the delivery receipt; also note any damage 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.

- Follow the instructions on the Carton Box for unpacking the unit.
- Inspect unit for damage such as, broken glass, etc.
- Report any dents or breakage to source of purchase immediately.
- **Do not attempt to use unit if damaged.**
- Remove all materials from unit interior.
- If unit has been stored in extremely cold area, wait a few hours before connecting power.

INSTALLATION CODES AND STANDARDS

In the United States, the FTU must be installed in accordance with the following:

1. State and local codes.
2. National Electrical Code (ANSI/NFPA No. 70, latest edition) available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
3. Vapor Removal from Cooking Equipment, (NFPA-96, latest edition) available from NFPA.

In Canada, the IRHS must be installed in accordance with the following:

1. Local codes.

Canadian Electrical Code (CSA C22.2 No. 3, latest edition) available from the Canadian Standards Association, 5060 Spectrum Way, Mississauga, Ontario, Canada L4W 5N6.

UNIT PLACEMENT

- Do not install unit next to or above source of heat such as oven or deep fat fryer.
- Install unit on level counter top surface.
- Outlet should be located so that plug is accessible when the unit is in place.
- The following minimum clearances must be maintained between the warmer and any combustible or non-combustible substance:

Unit	Clearance
Right Side	0"
Left Side	0"
Rear	8"
Floor	0"

Proper airflow around unit will cool the electrical components. With restricted airflow, the unit may not operate properly and the life of the electrical components may be reduced.

⚠WARNING ⚠

ELECTRICAL SHOCK HAZARD UNIT MUST BE SAFETY GROUNDED, EARTHED.

DO NOT MODIFY, DEFEAT ELECTRICAL CONNECTIONS OR ALTER PLUG.

ELECTRICAL CONNECTIONS

⚠WARNING BEFORE CONNECTING THE UNIT TO THE POWER SOURCE, VERIFY THAT THE VOLTAGE AND PHASE OF THE POWER SOURCE ARE IDENTICAL TO THE VOLTAGE AND PHASE INFORMATION ON THE DATA LABEL.

EARTHING INSTRUCTIONS

THE UNIT MUST BE GROUNDED. Grounding reduces risk of electric shock by providing an escape wire for the electric current if an electrical short occurs. This unit is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into a receptacle that is properly installed and grounded.

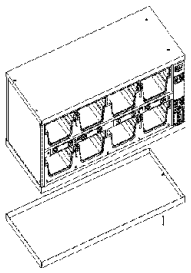
Consult a qualified electrician or service agent if grounding instructions are not completely understood, or if doubt exists as to whether the oven is properly grounded.

DO NOT USE AN EXTENSION CORD. If the product power cord is too short, have a qualified electrician install a three-slot receptacle (or the country specific receptacle for International Units). This unit should be plugged into a separate circuit with the electrical rating as provided on the product data plate.

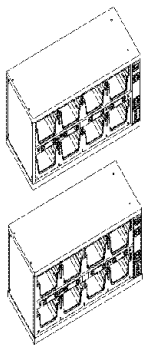
STACKING UNITS

The IRHS Holding Unit is designed to allow limited stacking capabilities. This section outlines how to safely stack the holding unit.

Step 1

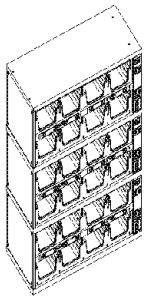


Remove the base pan from all holding units, except for bottom unit, that are to be stacked. The pan is held in place by two screws on the bottom of the unit.



Step 2

Place bottom unit into position then stack the next unit on top. The top of the lower holding unit rests inside of the base of the upper unit.



⚠WARNING TIP HAZARD! DO NOT STACK IRHS-34 UNITS. DO NOT EXCEED 3 HOLDING UNITS PER STACK. DO NOT PLACE HOLDING UNIT STACKS ON SURFACES THAT MAY EASILY TIP OVER.

UNIT TO UNIT COMMUNICATION CONNECTIONS

ALPHA NUMERIC COMMUNICATION CONNECTIONS

Each unit with an ICC Timer Control can control up to two additional units (only one IRHS-34 can be added) (those without ICC Timer Control). The following are the field connections for these units.

NOTE: Product Holding Cabinets with digital keyboard timer can only use up to a maximum of four digital keyboard combinations.

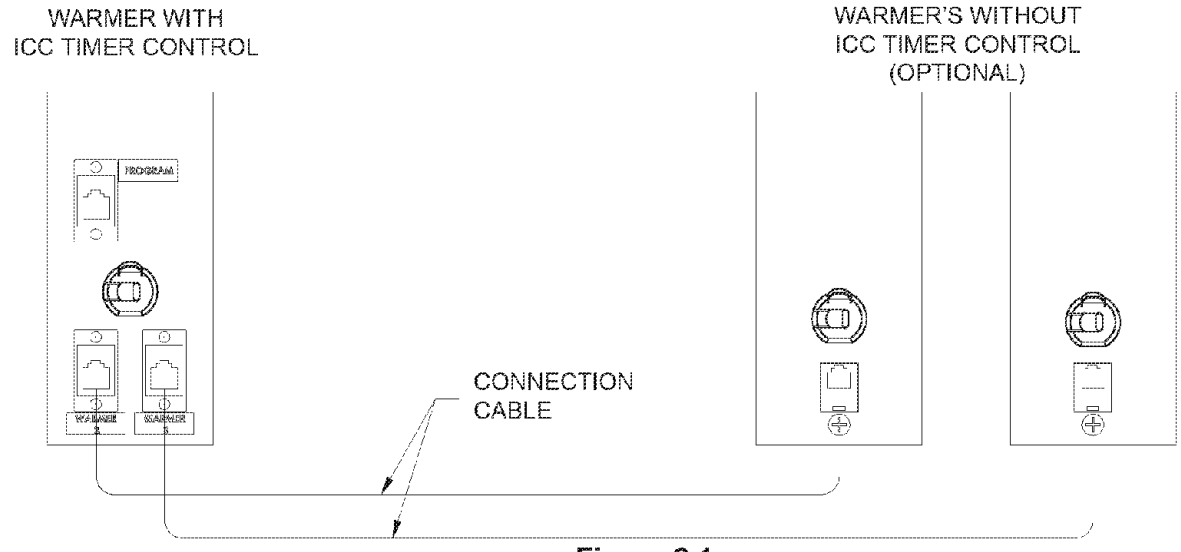


Figure 2.1

Red Light Green Light Communication Connections

Main Board Field Connection

The MB-1 Main board Unit that has the ICC Black Box internally mounted can be identified as the warmer with timer bars on both sides and plug connections numbered Warmer #1 and #3 as shown in Figure 2.1. This unit is internally wired and ready to operate. Should your restaurant have two units on the main board this second unit can be identified as the warmer with timer bars on each side and one plug connection as shown in Figure 2.2. To put this second unit into operation connect the provided cable between the #1 plug connection on the MB-1 and the single plug connection on the MB-2 unit.

The ICC provided steamer bar and cable plugs into the #3 plug connection on the MB-1 unit as shown in Figure 2.1. The program connection is used with the ICC provided Palm Pilot programming device.

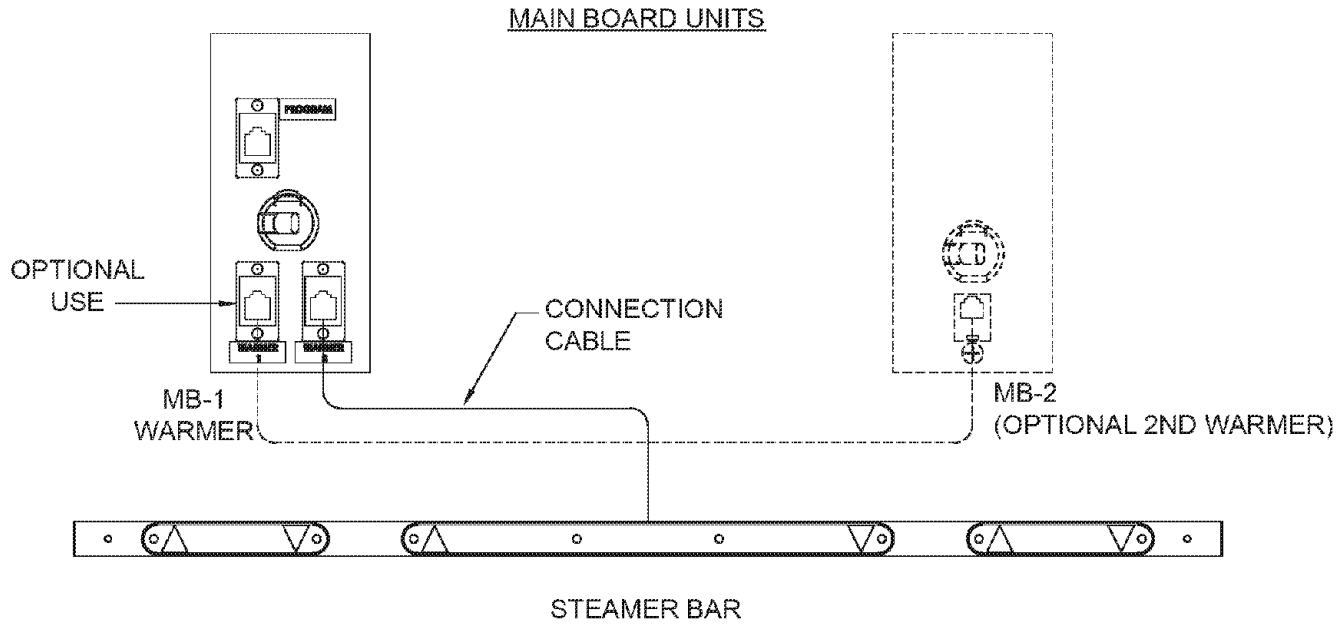


Figure 2.2

Specialty Board Field Connection

The SB-1 Specialty Board Unit that has the ICC black box internally mounted can be identified as the warmer with one timer bar and plug connections number Warmer #2 and #3 as shown in Figure 2.2. This unit is internally wired and ready to operate. The SB-2 Specialty board Unit has one timer bar and one plug connection as shown in Figure 2.2. To put this unit into operation connect the provided cable between the #3 plug connection on the SB-1 and the single plug connection on the SB-2 unit. The #2 plug connection is **NOT** used.

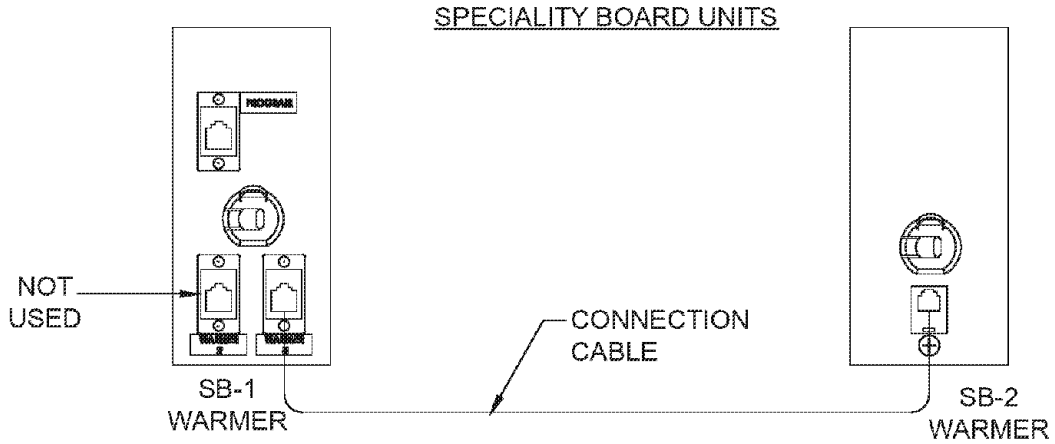
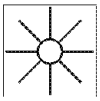


Figure 2.3

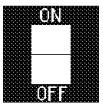
PERIODIC MAINTENANCE, CHECKLIST AND CLEANING GUIDE

DAILY



Opening Checklist

1. Ensure **Heat Sink Covers** are inserted into the correct locations (Broiled Product Pans).
2. Place the **Power Switch**, located on the front of the IRHS, to the ON position.
3. Ensure all displays show temperature as unit preheats.
4. Allow the IRHS to heat for at least 30 minutes.



OPERATION INSTRUCTIONS/ADJUSTMENTS

1. If warnings are present during operation of the IRHS, discontinue use of the affected shelf until the unit is serviced.
2. Operate using Timer Bar as outlined in the Menu Scoreboard Operators Manual.



CLOSING CHECKLIST

1. Turn power switch OFF.
2. Remove all pans and heat sink covers.
3. Allow to cool for approximately 30 minutes.
4. Clean Unit as outlined in the Daily Cleaning Instructions.



CLEANING INSTRUCTIONS

1. Wipe down the interior and exterior of the IRHS Holding Unit with warm water and mild detergent using a soft cloth. Do not use excessive amounts of water.
2. Clean pans and heat sink covers using mild detergent and warm water. Ensure all soap is rinsed from plastic pans and pan covers.

⚠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 AND PLASTIC SURFACES.

⚠WARNING  **Bottom and sides of warmer wells are very hot and cool slowly.**

INFRA RED HEAT SINK UNIT
ROUTINE MAINTENANCE & UPKEEP

DAILY CLEANING

- Stainless Steel Surfaces

MAINTENANCE – Stainless Steel Care & Cleaning

To prevent discoloration or rust on stainless steel several important steps need to be taken. Stainless steel contains 70-80% iron which will rust. It also contains 12-30% chromium which forms an invisible passive film over the steels surface which acts as a shield against corrosion. As long as the protective layer is intact, the metal will not corrode. If the film is broken or contaminated, outside elements can begin to breakdown the steel and begin to form rust or discoloration.

Proper cleaning of stainless steel requires soft cloths or plastic scouring pads.

⚠CAUTION

Never use steel pads, wire brushes or scrapers.

Cleaning solutions need to be alkaline based or non-chloride cleaners. Any cleaner containing chlorides will damage the protective film of the stainless steel. Chlorides are also commonly found in hard water, salts and household and industrial cleaners. If cleaners containing chlorides are used, be sure to rinse repeatedly and dry thoroughly upon completion.

Routine cleaning of stainless steel can be done with soap and water. Extreme stains or grease should be cleaned with a non-abrasive cleaner and plastic scrub pad. It is always good to rub with the grain of the steel. There are also stainless steel cleaners available which can restore and preserve the finish of the steels protective layer.

Early signs of stainless steel breakdown can consist of small pits and cracks. If this has begun, clean thoroughly and start to apply stainless steel cleaners in an attempt to restore the passivity of steel.

⚠WARNING **NEVER USE AN ACID BASED CLEANING SOLUTION! MANY FOOD PRODUCTS HAVE AN ACIDIC CONTENT WHICH CAN DETERIORATE THE FINISH. BE SURE TO CLEAN ALL FOOD PRODUCTS FROM ANY STAINLESS STEEL SURFACE. COMMON ITEMS INCLUDE, TOMATOES, PEPPERS AND OTHER VEGETABLES.**

⚠WARNING **THE POWER MUST BE TURNED OFF AND DISCONNECTED AT ALL TIMES WHEN PERFORMING MAINTENANCE OR REPAIR FUNCTIONS.**

CAUTION **NEVER USE A HIGH-PRESSURE WATER WASH FOR THIS CLEANING PROCEDURE AS WATER CAN DAMAGE ELECTRICAL COMPONENTS**

CAUTION **ELECTRICAL SHOCK HAZARD. DO NOT WASH WITH WATER JET OR HOSE.**

DANGER GLASS: INSPECT GLASS DAILY FOR CHIPS, CRACKS, OR BREAKING. DISCARD ALL FOOD AND NOTIFY MANAGER IF ANY CHIPS, CRACKS, OR BROKEN GLASS ARE FOUND. DO NOT USE EQUIPMENT. ALL GLASS MUST BE IN GOOD CONDITION BEFORE USING EQUIPMENT TO HOLD FOOD.

RECOMMENDED SUPPLIES

Cleaning Towels

Non-Scratch Scrub Pad

SYR Cleaning Brush Tool

KAY™ Degreaser

KAY® SINK SANITIZER, KAYQUAT™ Sanitizer, or compatible sanitizer

PROCEDURE

1. Turn unit off, unplug, and allow to cool for 30 minutes.
2. Remove all holding pans and heat sink covers. Wash, rinse, and sanitize at the 3-compartment sink.
3. Allow to air dry.
4. Spray a cleaning towel, or non-scratch scrub pad when necessary, with soapy solution or KAY™ Degreaser. Fully clean upper glass surfaces by hand, as well as lower heat sink surfaces.

NOTE: Never spray cleaning solution directly onto the cabinet.

5. If daily cleaning is performed routinely, deeper, more aggressive, cleaning methods can be avoided. Over longer periods of time, fried food product can accumulate and bake on to the upper glass surfaces of the compartments. The SYR Cleaning Brush Tool can be used to remove heavier accumulation.
6. Spray the brush head with KAY™ Degreaser and use the SYR Cleaning Brush Tool, as shown below, by gently sliding in and out of each compartment.



7. Use a sanitizer-soaked towel and wipe out all compartments on the holding unit. Wipe top compartments first, and then lower compartments.

IMPORTANT: Use clean, sanitizer-soaked towels (Important: towels must be wrung out so that they are damp and not dripping, dripping towels may harm the unit.)

DAILY INSPECTION CHECKLIST:

- Inspect glass for chips, cracks, or breaking.
- Make sure that:
- Unit is free of any visible food soils.
- Unit is free of grease or soils in holding compartment.
- Exterior of unit is free of smudges or soil.
- Holding pans are free of any food soil residue.
- Pans are free of damage such as cracks.

DIAGNOSTICS

IR BULB FUNCTION

- IR bulbs are either ON or OFF.
- Select an arrow to initiate a hold cycle.
- Within a short amount of time, visually confirm the IR bulb comes on.

DIAGNOSTICS

The temperature control performs a routine, internal check after turning the unit on to validate the unit is sensing temperature and heating properly. In the event of a problem, an error will display on the timer bar.

BULB – IR BULB CIRCUIT FAULT

- Indicates a fault with a specified IR Bulb circuit. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault.

HIGH – OVER-TEMPERATURE FAULT

- Indicates a fault with a heating circuit component. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault.

LOW – UNDER-TEMPERATURE FAULT

- Indicates a fault with a heating circuit component. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault.

SENS – SENSOR FAULT

- May indicate the unit has been programmed improperly (i.e. loading a 2x4 product configuration file into a 2x2 unit). An attempt to properly reprogram the unit should be made.
- May indicate a fault with a heat sink temperature sensor. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault

TEMPERATURE CHECK PROCEDURE

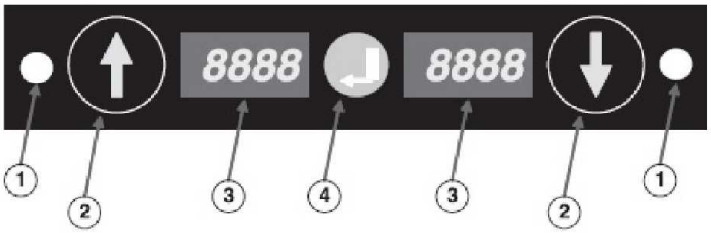
1. A digital temperature meter that has been calibrated must be used to get an accurate temperature reading. Use a thermocouple surface temperature probe to measure temperatures.
2. **No pans should be in wells during the pre-heat and temperature check.** Pre-heat the warmer for 30 minutes before taking any temperature readings. Do not take readings unless the cavity has been empty for 30 minutes. This will allow the temperature to stabilize and will prevent false readings.
3. The warmer cavity should be cleaned and empty before the temperature is checked. Avoid any air drafts that might flow through the cavity.
4. Locate the surface temperature probe on the bottom of the first cavity as shown for the cabinet size.
5. All temperature controls exhibit a swing in temperature as the control cycles on and off while regulating to the set point. The correct calibration temperature is the average of several readings taken over a period of 20 minutes after the warmer has been pre-heated. The average temperature should be ± 5°F from the set point.

OPERATING INSTRUCTIONS

OPERATION - OPERATING PROCEDURE

- Ensure proper heat sink covers are inserted into the correct location (broiled and moisture sensitive products only).
- Upon turning ON, allow the holding unit to heat for at least 30 minutes or until the temperature disappears and the timer bars display the pre-programmed product names.
- If the timer bars display temperature at any time after the preheat period, discontinue use of the affected pan location(s) until the holding unit can be serviced.

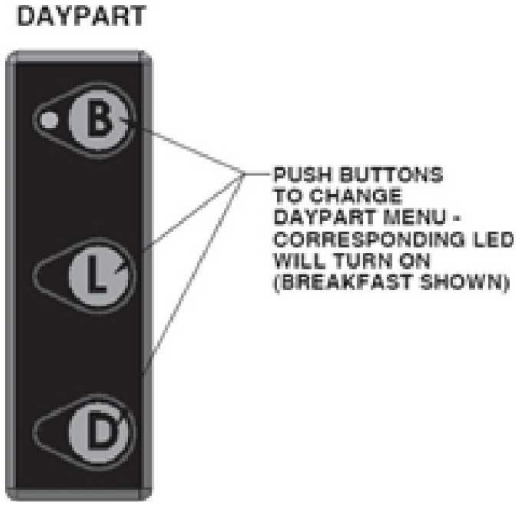
OPERATION – TIMER BAR FUNCTIONALITY



1. Status LEDs: Used for indicating status of pan.
   a. Non-Illuminated -Timer is Inactive – no product in pan
   b. GREEN – Timer is Active – product in pan (use first)
   c. FLASHING GREEN = Cook Warning Time reached (cook more product) or keypad in EDIT MODE (programming)
2. Arrow Buttons
   a. Used for Starting / Stopping / Resetting Timer.
   b. Used to access MENU MODE.
   c. Indicate which pan the adjacent Status LED and Pan Display are linked to.
3. Pan Display
   a. Displays Product Name and Hold Time Remaining (alternates between the two when Timer is active).
4. Enter Button
   a. Used to access MENU MODE.

OPERATION – CHANGE DAYPARTS

Select the appropriate Daypart Button to switch between Breakfast, Lunch, and Dinner menus.



Once to temperature, product names can be viewed on the displays. Additional settings such as LINK, TIME, and TEMP can be viewed two different ways.

- Manually accessing Menu Mode through Timer Bars
- Uploading unit settings from the Duke Holding Unit to a USB Drive and viewing via the Internet.

SETTINGS – CHECKING PRODUCT SETTINGS (MENU MODE)

Enter Menu Mode

1. Press and hold the ENTER Button for three seconds. Status LED FLASHES and "MENU" is displayed on left Display and either "UP" or "DOWN" is displayed on the right display, indicating which pan location information will be displayed.



2. After selecting the UP or DOWN Arrow, press the ENTER Button to accept.

MENU MODE – MANUAL ALTERNATIVE TO CHANGE DAYPART

1. Status LED stops flashing and "MEAL SET1" appears on the Display.



2. Press the ENTER Button again. Status LED FLASHES indicating Edit Mode.



3. Use the Arrow Buttons to scroll to desired Daypart (i.e. "MEAL SET2", MEAL SET3") and press the ENTER Button to accept.
4. Status LED stops flashing, "UPDATING" is displayed for a few seconds, and then the desired Daypart ("MEAL SET") is displayed.



MENU MODE – DISPLAY LINK, HOLD TIME, TEMPERATURE

1. Press the UP Arrow Button repeatedly to scroll up or down through "LINK", "TIME", and "TEMP". The DOWN Arrow button can be used to cycle the opposite direction.



This indicates all products named BURG are linked pan locations.



This indicates the hold time for BURG.



This indicates the Heat Sink Temperature for BURG.

EXIT MENU MODE

1. Press the UP Arrow Button one last time to scroll to "EXIT" and press the ENTER Button to exit Menu Mode.



SETTINGS – CHECKING PRODUCT SETTINGS (VIA USB FILE)

USB File Upload from Unit

1. Turn IRHS ON and wait for temperature or product names to display.
2. Insert a BLANK USB Drive into the USB port. USB Port LED will light solid green and a single chirp should be heard.
3. Display will go blank and USB Port LED will begin flashing green.
4. A second chirp should be heard, USB Port LED will return to solid green.
5. File has successfully uploaded from IRHS to USB Drive.
6. Remove USB Drive from Port.
7. Refer to STEP 2 in the Programming section to view file on the Internet.

CHECK – HEAT SINK TEMPERATURE & IR BULB FUNCTION CHECK

Heat sink surface

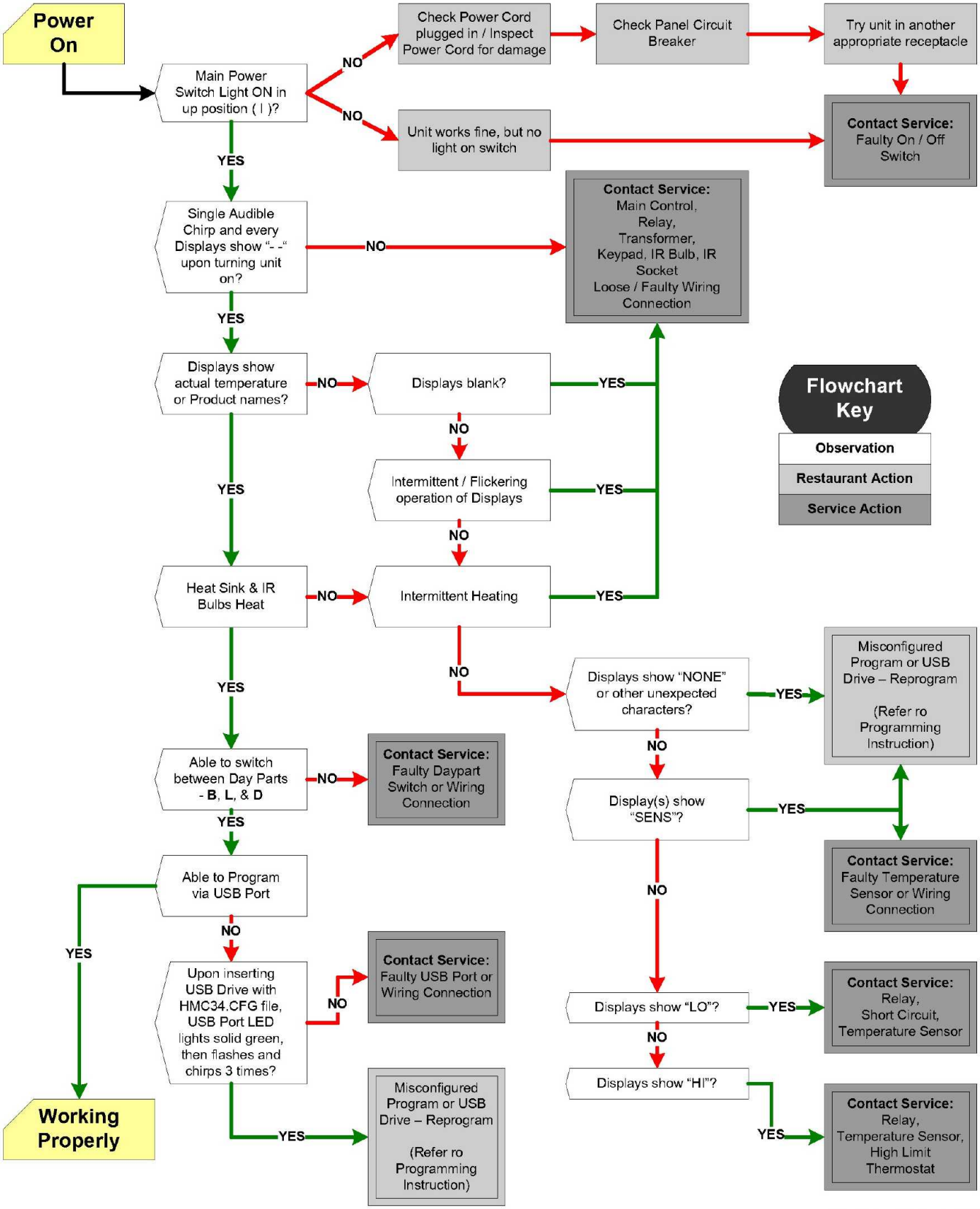
- A surface temperature probe can be used to check the temperature of the heat sink surface.
- No pans should be in wells during the pre-heat and temperature check period. Pre-heat the holding unit for 30 minutes before taking any temperature readings.
- Ensure the pan location being measured is not in a hold cycle mode (timing down).
- Locate the surface temperature probe in the geometric center of the desired pan location. Make sure the probe is making good contact with the surface while taking readings.
- The temperature control will exhibit a swing in temperature as the control cycles on and off while regulating to the set point temperature. The average of several readings taken should be +/- 5°F from the set point.
- Compare the measured temperature to the programmed heat sink set point (TEMP) for the specified pan location.

PARTS LISTS AND ILLUSTRATIONS

			Qty Per Unit			
Locator	P/N	Description	IRHS-22	IRHS-23	IRHS-24	IRHS-34

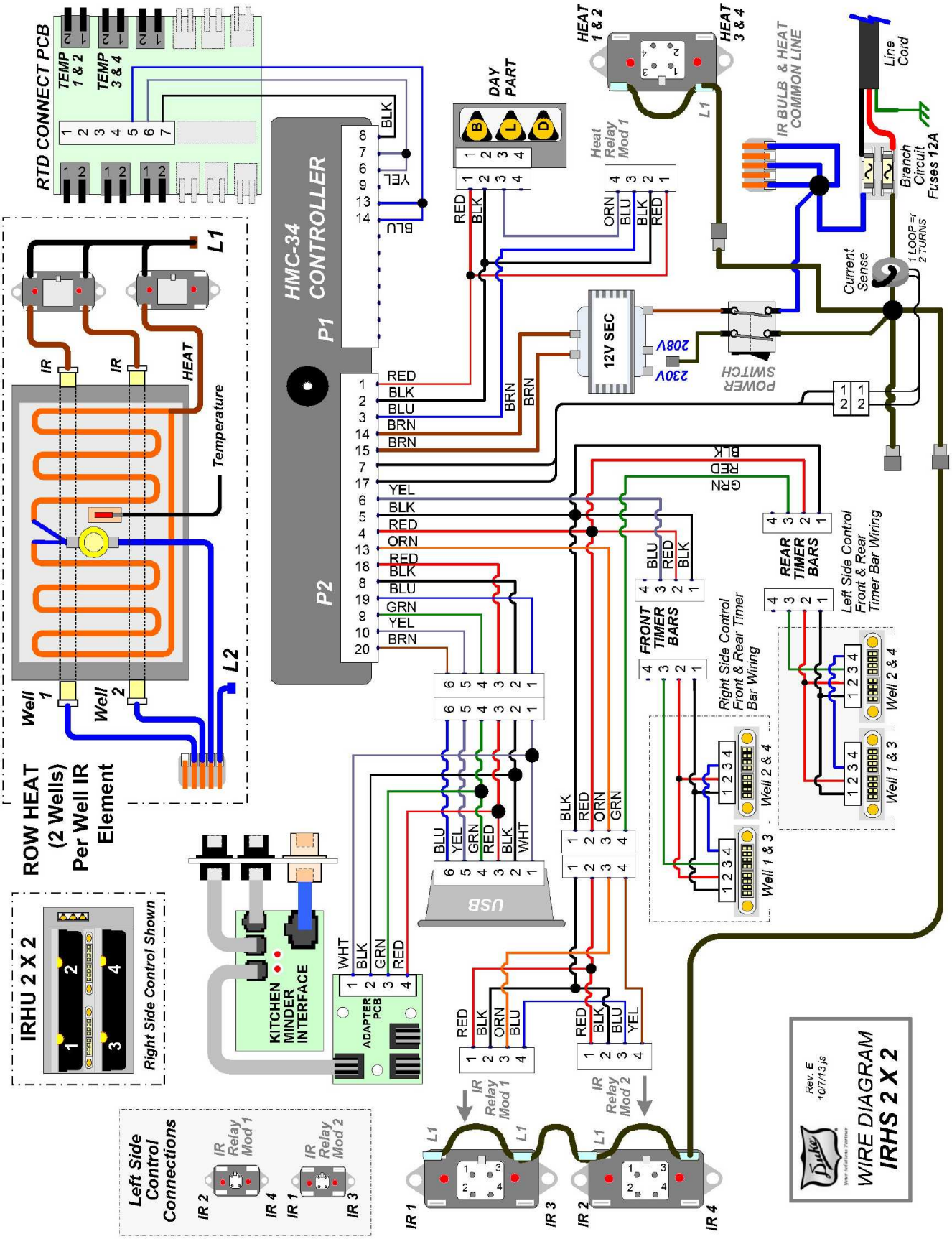
TROUBLE SHOOTING

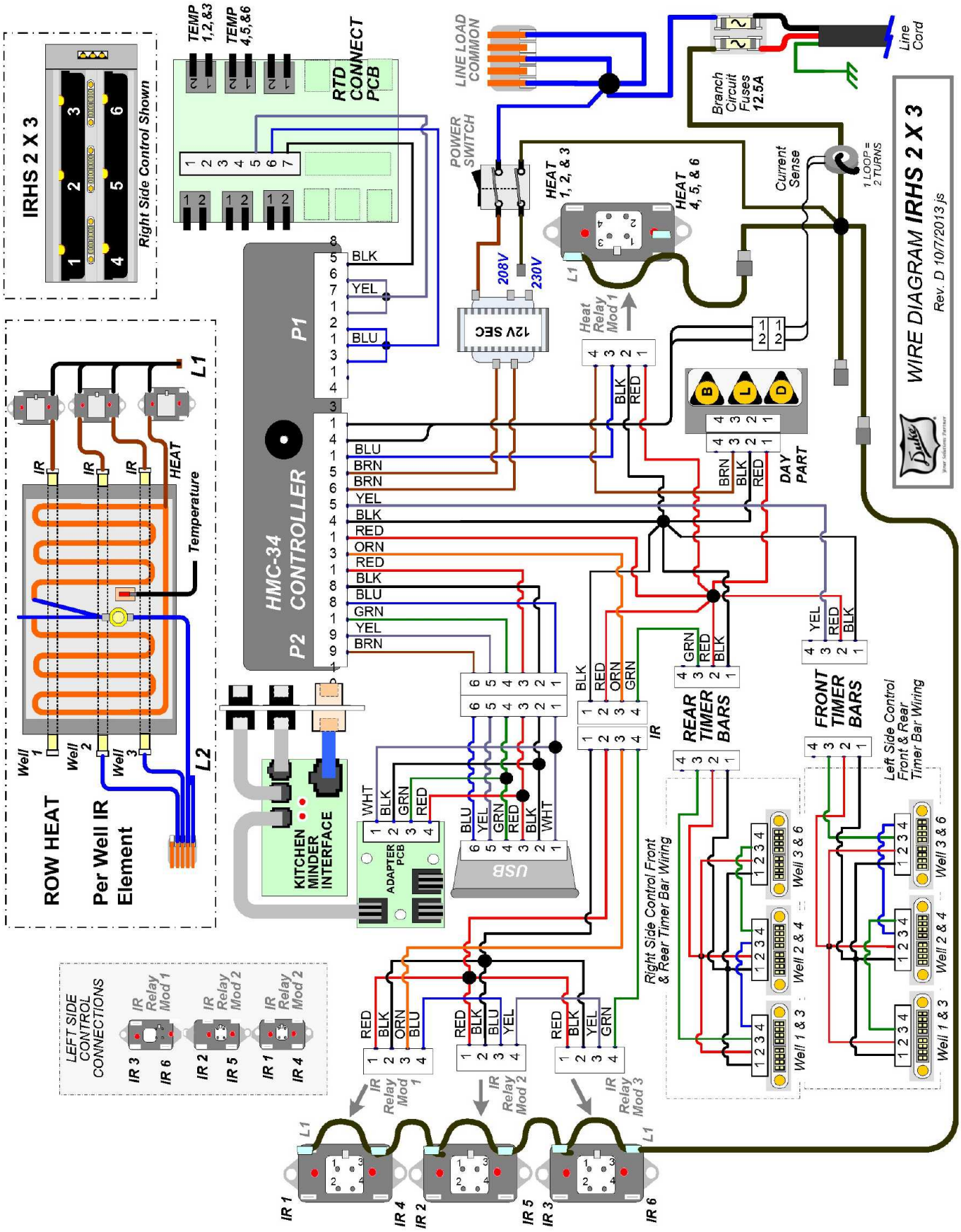
IRHS Troubleshooting

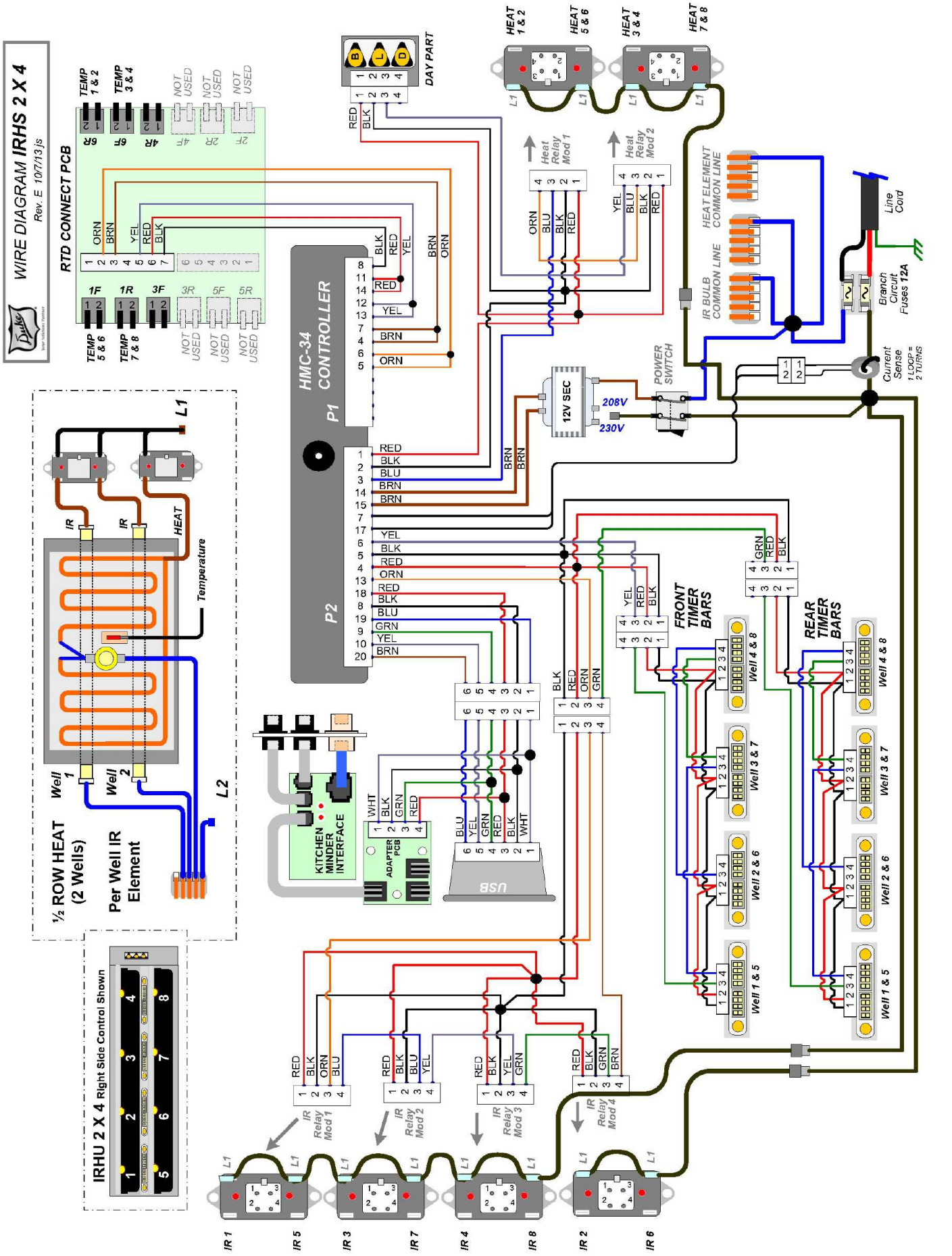


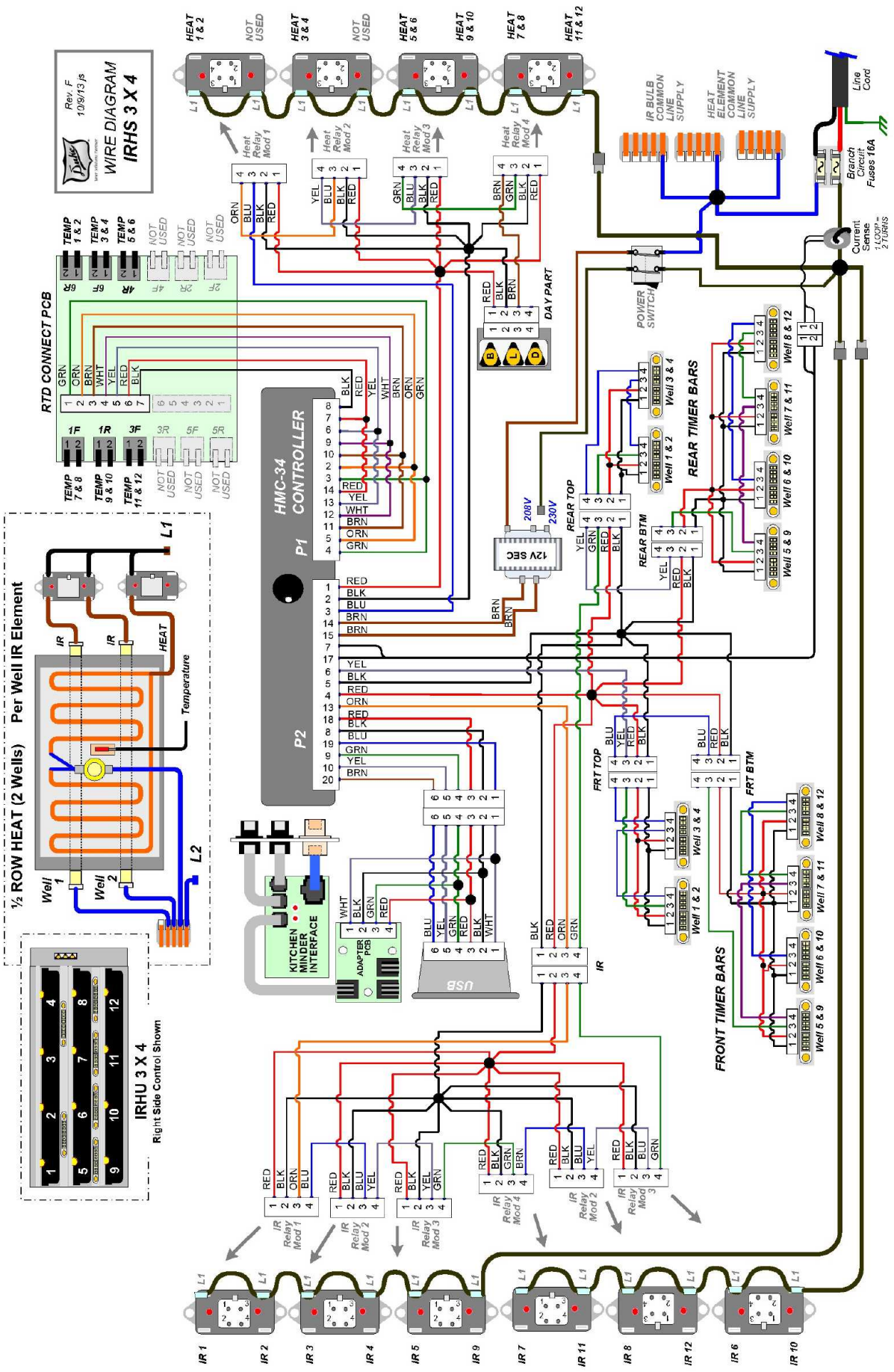
Revision Date 10/2/13

WIRING SCHEMATICS

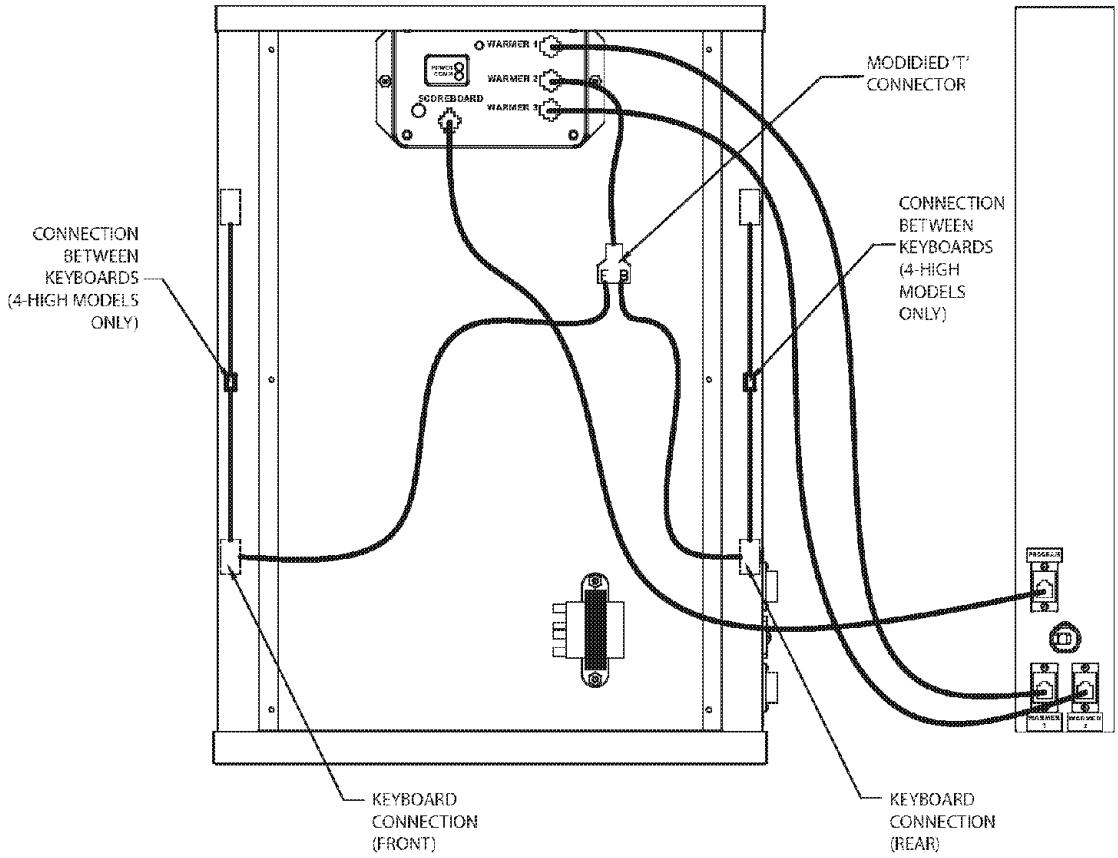



IRHS 2 X 3
Right Side Control Shown
TEMP 1,2,&3
TEMP 4,5,&6
RTD CONNECT PCB
LINE LOAD COMMON
POWER SWITCH
HEAT 1, 2, & 3
HEAT 4, 5, & 6
Current Sense
1 LOOP = 2 TURNS
Branch Circuit Fuses 12.5A
Line Cord
208V
230V
12V SEC
Heat Relay Mod 1
HMC-34 CONTROLLER
P1
P2
BLK
YEL
BLU
BRN
RED
ORN
GRN
WHT
B
L
D
DAY PART
WIRE DIAGRAM IRHS 2 X 3
Rev. D 10/7/2013 js
L1
L2
IR
HEAT
Temperature
Well 1
Well 2
Well 3
ROW HEAT
Per Well IR Element
KITCHEN MINDER INTERFACE
ADAPTER PCB
USB
REAR TIMER BARS
FRONT TIMER BARS
Left Side Control Front & Rear Timer Bar Wiring
Right Side Control Front & Rear Timer Bar Wiring
Well 1 & 3
Well 2 & 4
Well 3 & 6
LEFT SIDE CONTROL CONNECTIONS
IR Relay Mod 1
IR Relay Mod 2
IR Relay Mod 3
IR 1
IR 2
IR 3
IR 4
IR 5
IR 6

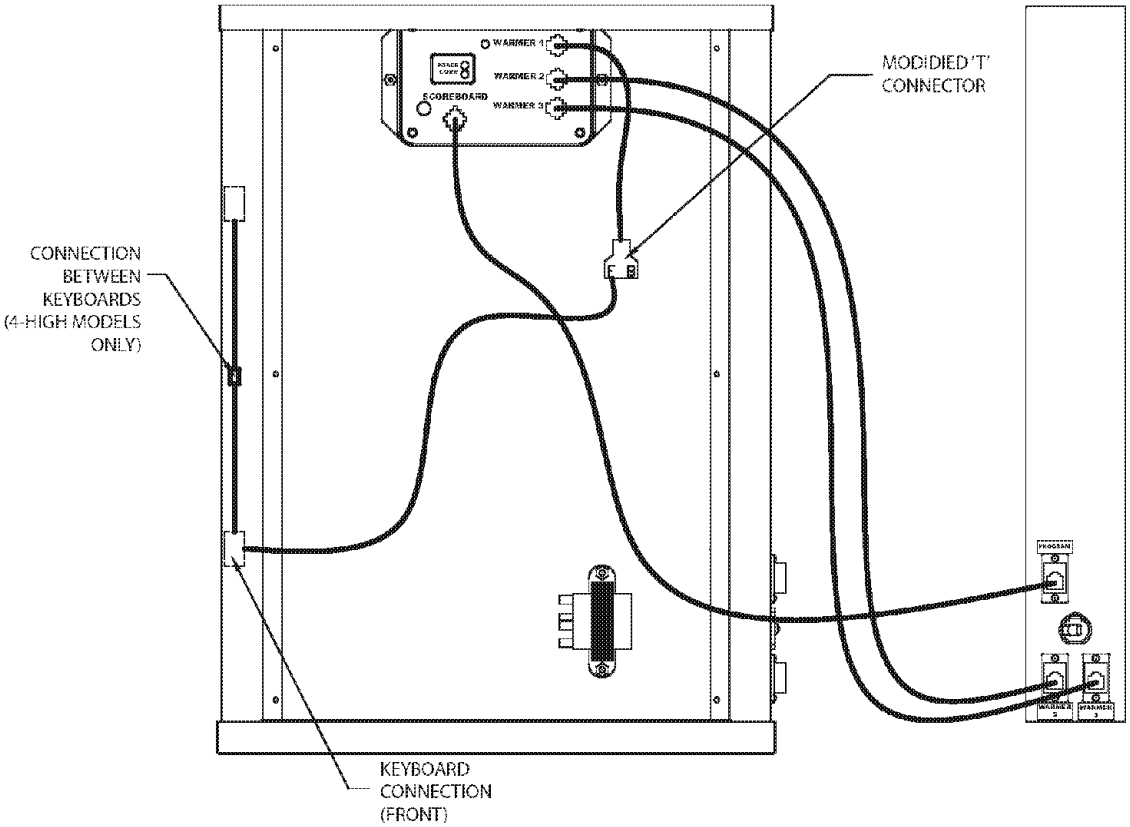

WIRE DIAGRAM IRHS 2 X 4
Rev. E 10/7/13 js
RTD CONNECT PCB
TEMP 1 & 2
TEMP 3 & 4
TEMP 5 & 6
TEMP 7 & 8
NOT USED
1F
1R
3F
3R
5F
5R
6R
6F
4R
4F
2R
2F
DAY PART
HEAT 1 & 2
HEAT 5 & 6
HEAT 3 & 4
HEAT 7 & 8
Heat Relay Mod 1
Heat Relay Mod 2
HMC-34 CONTROLLER
P1
P2
12V SEC
208V
230V
POWER SWITCH
HEAT ELEMENT COMMON LINE
IR BULB COMMON LINE
Line Cord
Branch Circuit Fuses 12A
Current Sense
1 LOOP = 2 TURNS
FRONT TIMER BARS
REAR TIMER BARS
Well 4 & 8
Well 3 & 7
Well 2 & 6
Well 1 & 5
KITCHEN MINDER INTERFACE
ADAPTER PCB
USB
½ ROW HEAT (2 Wells)
Per Well IR Element
IR
HEAT
Temperature
Well 1
Well 2
L1
L2
IRHU 2 X 4 Right Side Control Shown
IR Relay Mod 1
IR Relay Mod 2
IR Relay Mod 3
IR Relay Mod 4
IR 1
IR 5
IR 3
IR 7
IR 4
IR 8
IR 2
IR 6


WIRE DIAGRAM
IRHS 3 X 4
Rev. F
10/9/13 js
HEAT 1 & 2
HEAT 3 & 4
HEAT 5 & 6
HEAT 9 & 10
HEAT 7 & 8
HEAT 11 & 12
NOT USED
Heat Relay Mod 1
Heat Relay Mod 2
Heat Relay Mod 3
Heat Relay Mod 4
IR BULB COMMON LINE SUPPLY
HEAT ELEMENT COMMON LINE SUPPLY
Line Cord
Branch Circuit Fuses 16A
Current Sense 1 LOOP = 2 TURNS
POWER SWITCH
DAY PART
RTD CONNECT PCB
TEMP 1 & 2
TEMP 3 & 4
TEMP 5 & 6
TEMP 7 & 8
TEMP 9 & 10
TEMP 11 & 12
HMC-34 CONTROLLER
P1
P2
12V SEC
208V
230V
REAR TOP
REAR BTM
REAR TIMER BARS
Well 1 & 2
Well 3 & 4
Well 5 & 9
Well 6 & 10
Well 7 & 11
Well 8 & 12
FRT TOP
FRT BTM
FRONT TIMER BARS
IR
½ ROW HEAT (2 Wells) Per Well IR Element
L1
L2
IR
HEAT
Temperature
Well 1
Well 2
KITCHEN MINDER INTERFACE
ADAPTER PCB
USB
IRHU 3 X 4
Right Side Control Shown
IR 1
IR 2
IR 3
IR 4
IR 5
IR 9
IR 7
IR 11
IR 8
IR 12
IR 6
IR 10

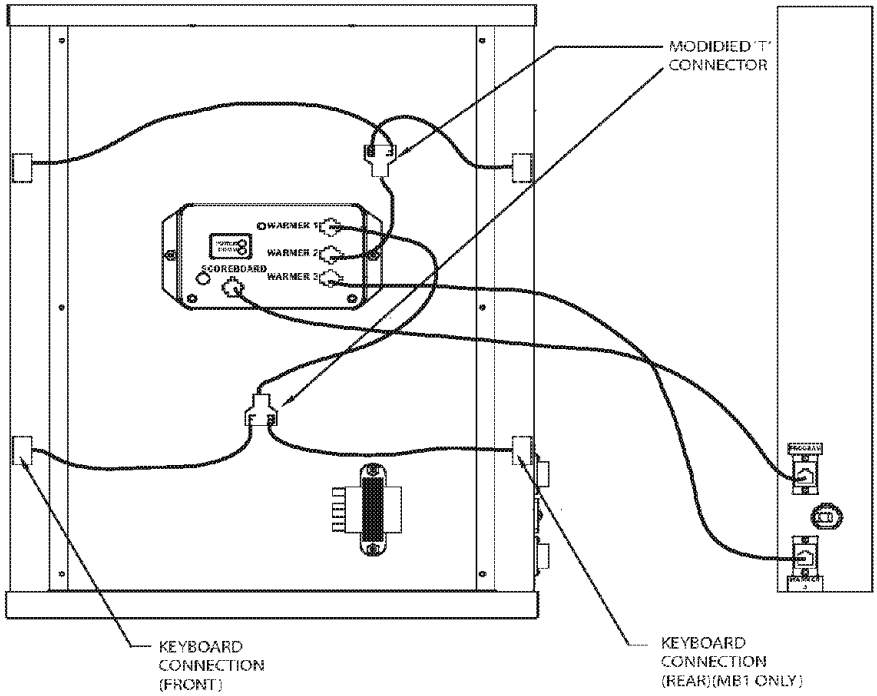
Interface Cable Wiring Schematics



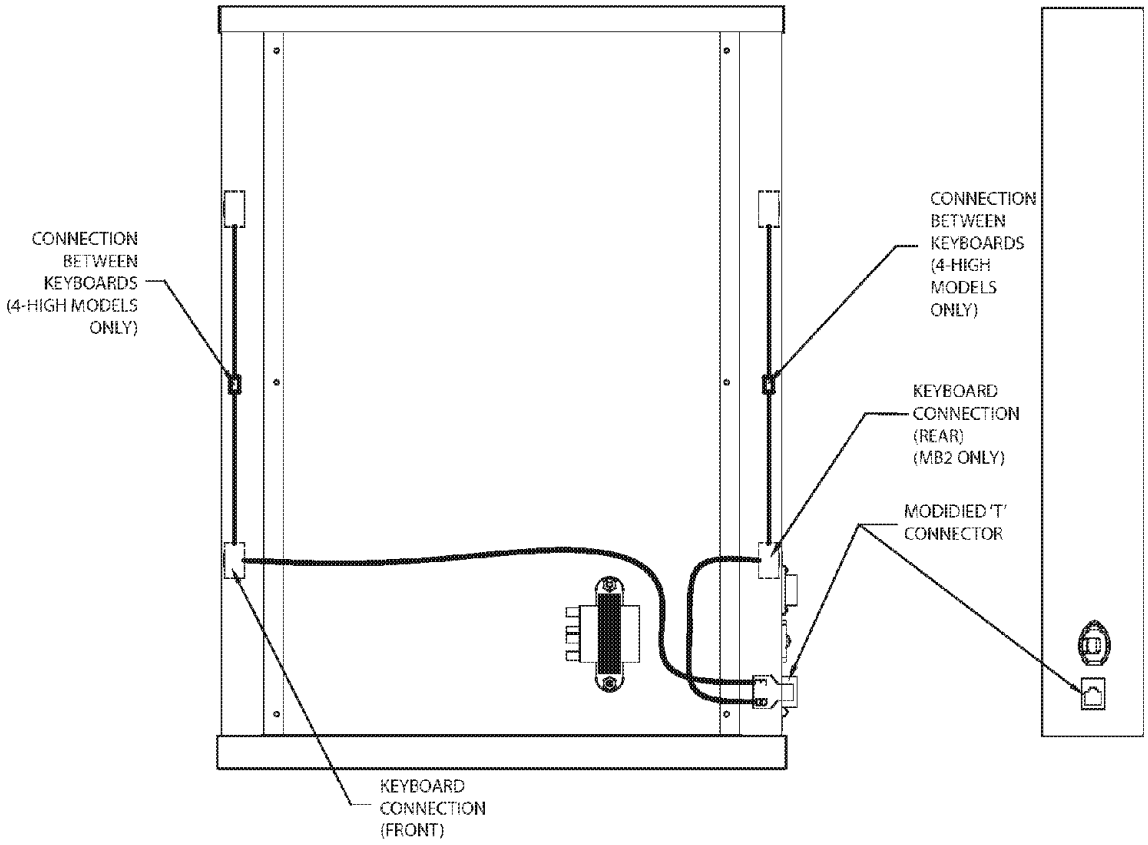
FWM3 - 2 High/4 High MB1 Interface Cable Schematic



FWM3 - 2 High/4 High SB1 Interface Cable Schematic



FWM3-34 MB1 & SB1Interface Cable Schematic



FWM3 - 2 High/3 High/4 High MB2 & SB2 Interface Cable Schematic



Your Solutions Partner

Duke Manufacturing Co.

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E-MAIL 4

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 12/6/2013 1:49:30 PM
To: bburrus@flreps.com
Subject: Duke IRHS Information
Attachments: 229945 Duke Manual IRHS.PDF; Duke IRHS Marketing Flyer.pdf; Duke IRHS Spec Sheet.pdf

Bill –

I will call you Monday to discuss. Here is some information to get you started.

Programming web site:
http://www.dukemfg.info/polloTropical/
ID = duke
Password = password

John

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM



WWW.DUKEMFG.COM

Your Solutions Partner

OPERATORS MANUAL

INFRA RED HEAT SINK ™ HOLDING UNIT

MODELS

IRHS-22
IRHS-23
IRHS-24
IRHS-34

IMPORTANT INFORMATION, READ BEFORE USE.
PLEASE SAVE THESE INSTRUCTIONS.

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P/N 229945
DRAFT

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MANUFACTURER'S INTRODUCTION

The IRHS Holding Unit was developed specifically to address the needs of Burger King restaurant operations and profitability. Extended hold times with improved food quality and consistency were achieved through the innovative combination of two proven, patented Duke technologies: Infra Red and Heat Sink. This new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product. This gives you the ability to maintain gold standard sensory attributes at drastically extended hold times while delivering hotter food to your customers.

In addition to providing the most robust and reliable solution technically possible, we also made the following improvements from the previous FWM PHU model:

- Eliminated plastic lids and replaced with a robust aluminum Heat Sink Cover for broiled foods
- Eliminated grease migration concerns
- Eliminated plastic faceplate and plastic lid capture system
- Changed to a more robust Duke timer bar and control system

Throughout this manual, you will uncover more details about the benefits and advantages that the Duke IRHS will bring to your restaurant. Thank you for your purchase and as always, your feedback is appreciated.

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.

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

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

CAUTION **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.**

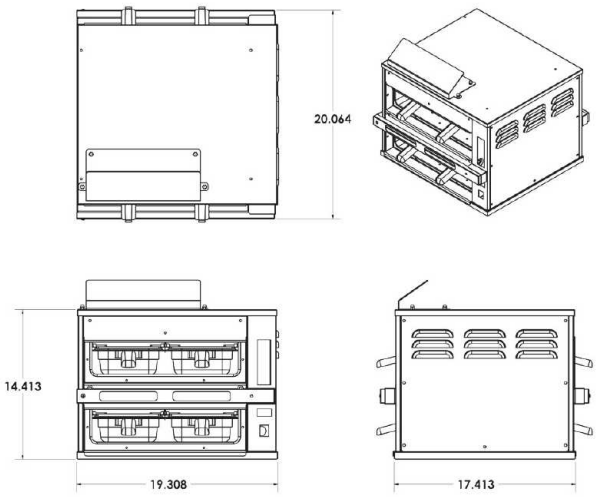
In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to defeat 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 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 should 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.

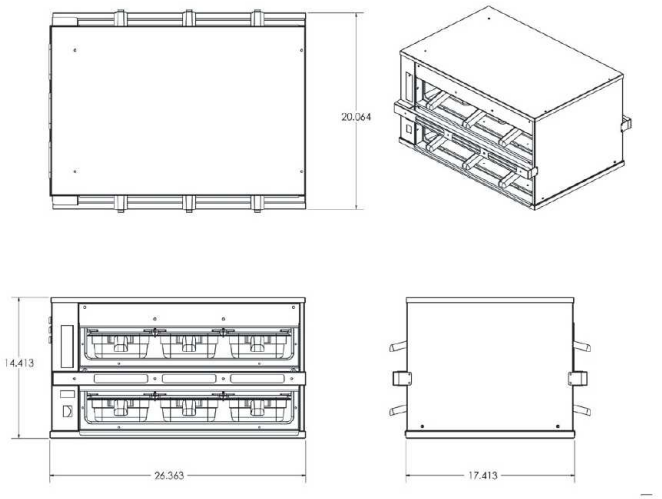
The following warnings and cautions appear throughout this manual and should be carefully observed.

- 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 should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.
- 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.

SPECIFICATIONS



IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

INSTALLATION

UNPACKING UNIT

Inspect the shipping carton and/or container, carefully noting any exterior damage on the delivery receipt; also note any damage 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.

- Follow the instructions on the Carton Box for unpacking the unit.
- Inspect unit for damage such as, broken glass, etc.
- Report any dents or breakage to source of purchase immediately.
- **Do not attempt to use unit if damaged.**
- Remove all materials from unit interior.
- If unit has been stored in extremely cold area, wait a few hours before connecting power.

INSTALLATION CODES AND STANDARDS

In the United States, the FTU must be installed in accordance with the following:

1. State and local codes.
2. National Electrical Code (ANSI/NFPA No. 70, latest edition) available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
3. Vapor Removal from Cooking Equipment, (NFPA-96, latest edition) available from NFPA.

In Canada, the IRHS must be installed in accordance with the following:

1. Local codes.

Canadian Electrical Code (CSA C22.2 No. 3, latest edition) available from the Canadian Standards Association, 5060 Spectrum Way, Mississauga, Ontario, Canada L4W 5N6.

UNIT PLACEMENT

- Do not install unit next to or above source of heat such as oven or deep fat fryer.
- Install unit on level counter top surface.
- Outlet should be located so that plug is accessible when the unit is in place.
- The following minimum clearances must be maintained between the warmer and any combustible or non-combustible substance:

Unit	Clearance
Right Side	0"
Left Side	0"
Rear	8"
Floor	0"

Proper airflow around unit will cool the electrical components. With restricted airflow, the unit may not operate properly and the life of the electrical components may be reduced.

⚠WARNING

ELECTRICAL SHOCK HAZARD UNIT MUST BE SAFETY GROUNDED, EARTHED.

DO NOT MODIFY, DEFEAT ELECTRICAL CONNECTIONS OR ALTER PLUG.

ELECTRICAL CONNECTIONS

⚠WARNING BEFORE CONNECTING THE UNIT TO THE POWER SOURCE, VERIFY THAT THE VOLTAGE AND PHASE OF THE POWER SOURCE ARE IDENTICAL TO THE VOLTAGE AND PHASE INFORMATION ON THE DATA LABEL.

EARTHING INSTRUCTIONS

THE UNIT MUST BE GROUNDED. Grounding reduces risk of electric shock by providing an escape wire for the electric current if an electrical short occurs. This unit is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into a receptacle that is properly installed and grounded.

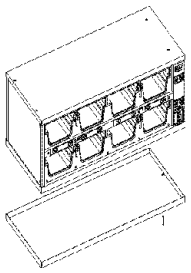
Consult a qualified electrician or service agent if grounding instructions are not completely understood, or if doubt exists as to whether the oven is properly grounded.

DO NOT USE AN EXTENSION CORD. If the product power cord is too short, have a qualified electrician install a three-slot receptacle (or the country specific receptacle for International Units). This unit should be plugged into a separate circuit with the electrical rating as provided on the product data plate.

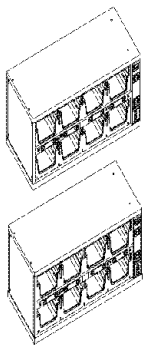
STACKING UNITS

The IRHS Holding Unit is designed to allow limited stacking capabilities. This section outlines how to safely stack the holding unit.

Step 1

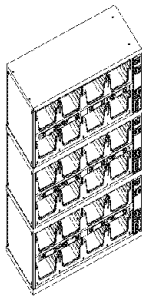


Remove the base pan from all holding units, except for bottom unit, that are to be stacked. The pan is held in place by two screws on the bottom of the unit.



Step 2

Place bottom unit into position then stack the next unit on top. The top of the lower holding unit rests inside of the base of the upper unit.



⚠WARNING TIP HAZARD! DO NOT STACK IRHS-34 UNITS. DO NOT EXCEED 3 HOLDING UNITS PER STACK. DO NOT PLACE HOLDING UNIT STACKS ON SURFACES THAT MAY EASILY TIP OVER.

UNIT TO UNIT COMMUNICATION CONNECTIONS

ALPHA NUMERIC COMMUNICATION CONNECTIONS

Each unit with an ICC Timer Control can control up to two additional units (only one IRHS-34 can be added) (those without ICC Timer Control). The following are the field connections for these units.

NOTE: Product Holding Cabinets with digital keyboard timer can only use up to a maximum of four digital keyboard combinations.

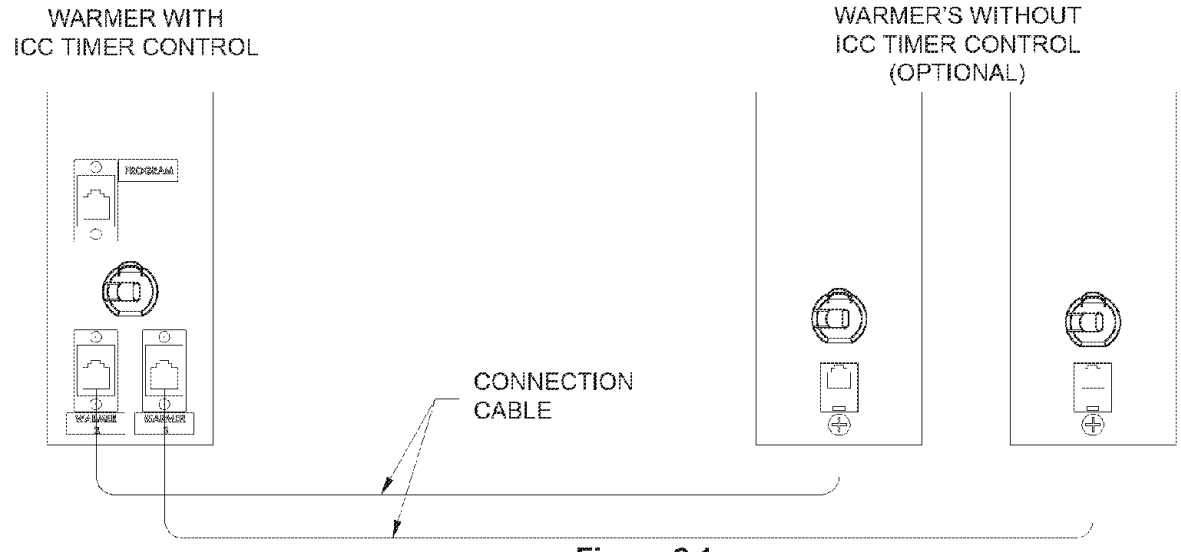


Figure 2.1

Red Light Green Light Communication Connections

Main Board Field Connection

The MB-1 Main board Unit that has the ICC Black Box internally mounted can be identified as the warmer with timer bars on both sides and plug connections numbered Warmer #1 and #3 as shown in Figure 2.1. This unit is internally wired and ready to operate. Should your restaurant have two units on the main board this second unit can be identified as the warmer with timer bars on each side and one plug connection as shown in Figure 2.2. To put this second unit into operation connect the provided cable between the #1 plug connection on the MB-1 and the single plug connection on the MB-2 unit.

The ICC provided steamer bar and cable plugs into the #3 plug connection on the MB-1 unit as shown in Figure 2.1. The program connection is used with the ICC provided Palm Pilot programming device.

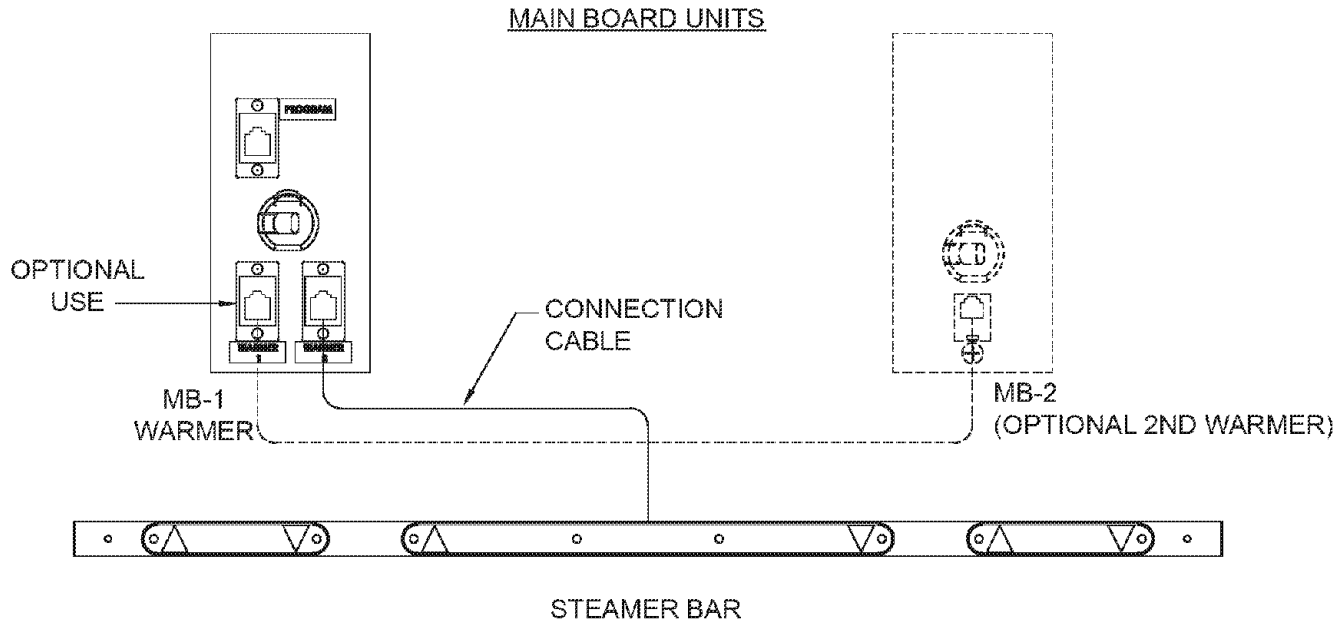


Figure 2.2

Specialty Board Field Connection

The SB-1 Specialty Board Unit that has the ICC black box internally mounted can be identified as the warmer with one timer bar and plug connections number Warmer #2 and #3 as shown in Figure 2.2. This unit is internally wired and ready to operate. The SB-2 Specialty board Unit has one timer bar and one plug connection as shown in Figure 2.2. To put this unit into operation connect the provided cable between the #3 plug connection on the SB-1 and the single plug connection on the SB-2 unit. The #2 plug connection is **NOT** used.

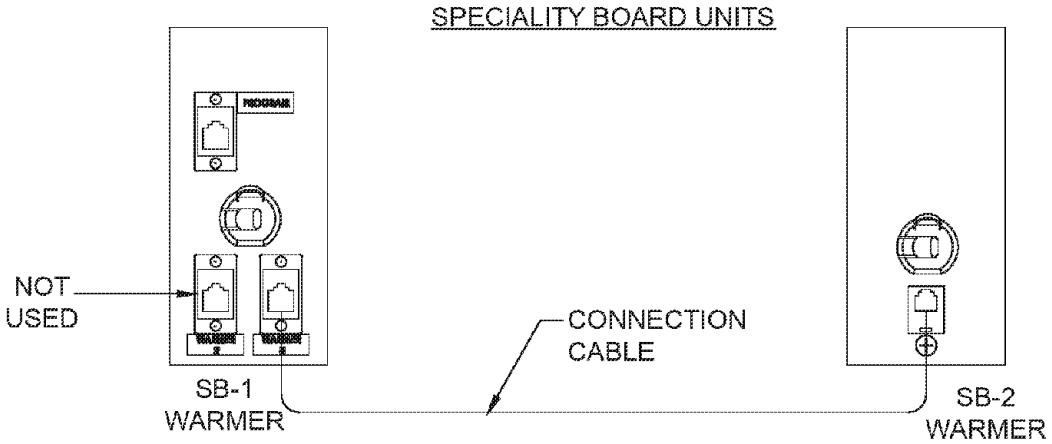
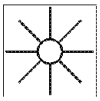


Figure 2.3

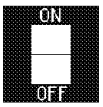
PERIODIC MAINTENANCE, CHECKLIST AND CLEANING GUIDE

DAILY



Opening Checklist

1. Ensure **Heat Sink Covers** are inserted into the correct locations (Broiled Product Pans).
2. Place the **Power Switch**, located on the front of the IRHS, to the ON position.
3. Ensure all displays show temperature as unit preheats.
4. Allow the IRHS to heat for at least 30 minutes.



OPERATION INSTRUCTIONS/ADJUSTMENTS

1. If warnings are present during operation of the IRHS, discontinue use of the affected shelf until the unit is serviced.
2. Operate using Timer Bar as outlined in the Menu Scoreboard Operators Manual.



CLOSING CHECKLIST

1. Turn power switch OFF.
2. Remove all pans and heat sink covers.
3. Allow to cool for approximately 30 minutes.
4. Clean Unit as outlined in the Daily Cleaning Instructions.



CLEANING INSTRUCTIONS

1. Wipe down the interior and exterior of the IRHS Holding Unit with warm water and mild detergent using a soft cloth. Do not use excessive amounts of water.
2. Clean pans and heat sink covers using mild detergent and warm water. Ensure all soap is rinsed from plastic pans and pan covers.

⚠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 AND PLASTIC SURFACES.

⚠WARNING  **Bottom and sides of warmer wells are very hot and cool slowly.**

INFRA RED HEAT SINK UNIT
ROUTINE MAINTENANCE & UPKEEP

DAILY CLEANING

- Stainless Steel Surfaces

MAINTENANCE – Stainless Steel Care & Cleaning

To prevent discoloration or rust on stainless steel several important steps need to be taken. Stainless steel contains 70-80% iron which will rust. It also contains 12-30% chromium which forms an invisible passive film over the steels surface which acts as a shield against corrosion. As long as the protective layer is intact, the metal will not corrode. If the film is broken or contaminated, outside elements can begin to breakdown the steel and begin to form rust or discoloration.

Proper cleaning of stainless steel requires soft cloths or plastic scouring pads.

⚠CAUTION

Never use steel pads, wire brushes or scrapers.

Cleaning solutions need to be alkaline based or non-chloride cleaners. Any cleaner containing chlorides will damage the protective film of the stainless steel. Chlorides are also commonly found in hard water, salts and household and industrial cleaners. If cleaners containing chlorides are used, be sure to rinse repeatedly and dry thoroughly upon completion.

Routine cleaning of stainless steel can be done with soap and water. Extreme stains or grease should be cleaned with a non-abrasive cleaner and plastic scrub pad. It is always good to rub with the grain of the steel. There are also stainless steel cleaners available which can restore and preserve the finish of the steels protective layer.

Early signs of stainless steel breakdown can consist of small pits and cracks. If this has begun, clean thoroughly and start to apply stainless steel cleaners in an attempt to restore the passivity of steel.

⚠WARNING NEVER USE AN ACID BASED CLEANING SOLUTION! MANY FOOD PRODUCTS HAVE AN ACIDIC CONTENT WHICH CAN DETERIORATE THE FINISH. BE SURE TO CLEAN ALL FOOD PRODUCTS FROM ANY STAINLESS STEEL SURFACE. COMMON ITEMS INCLUDE, TOMATOES, PEPPERS AND OTHER VEGETABLES.

⚠WARNING THE POWER MUST BE TURNED OFF AND DISCONNECTED AT ALL TIMES WHEN PERFORMING MAINTENANCE OR REPAIR FUNCTIONS.

CAUTION NEVER USE A HIGH-PRESSURE WATER WASH FOR THIS CLEANING PROCEDURE AS WATER CAN DAMAGE ELECTRICAL COMPONENTS

CAUTION ELECTRICAL SHOCK HAZARD. DO NOT WASH WITH WATER JET OR HOSE.

DANGER GLASS: INSPECT GLASS DAILY FOR CHIPS, CRACKS, OR BREAKING. DISCARD ALL FOOD AND NOTIFY MANAGER IF ANY CHIPS, CRACKS, OR BROKEN GLASS ARE FOUND. DO NOT USE EQUIPMENT. ALL GLASS MUST BE IN GOOD CONDITION BEFORE USING EQUIPMENT TO HOLD FOOD.

RECOMMENDED SUPPLIES

Cleaning Towels

Non-Scratch Scrub Pad

SYR Cleaning Brush Tool

KAY™ Degreaser

KAY® SINK SANITIZER, KAYQUAT™ Sanitizer, or compatible sanitizer

PROCEDURE

1. Turn unit off, unplug, and allow to cool for 30 minutes.
2. Remove all holding pans and heat sink covers. Wash, rinse, and sanitize at the 3-compartment sink.
3. Allow to air dry.
4. Spray a cleaning towel, or non-scratch scrub pad when necessary, with soapy solution or KAY™ Degreaser. Fully clean upper glass surfaces by hand, as well as lower heat sink surfaces.

NOTE: Never spray cleaning solution directly onto the cabinet.

5. If daily cleaning is performed routinely, deeper, more aggressive, cleaning methods can be avoided. Over longer periods of time, fried food product can accumulate and bake on to the upper glass surfaces of the compartments. The SYR Cleaning Brush Tool can be used to remove heavier accumulation.
6. Spray the brush head with KAY™ Degreaser and use the SYR Cleaning Brush Tool, as shown below, by gently sliding in and out of each compartment.



7. Use a sanitizer-soaked towel and wipe out all compartments on the holding unit. Wipe top compartments first, and then lower compartments.

IMPORTANT: Use clean, sanitizer-soaked towels (Important: towels must be wrung out so that they are damp and not dripping, dripping towels may harm the unit.)

DAILY INSPECTION CHECKLIST:

- Inspect glass for chips, cracks, or breaking.
- Make sure that:
- Unit is free of any visible food soils.
- Unit is free of grease or soils in holding compartment.
- Exterior of unit is free of smudges or soil.
- Holding pans are free of any food soil residue.
- Pans are free of damage such as cracks.

DIAGNOSTICS

IR BULB FUNCTION

- IR bulbs are either ON or OFF.
- Select an arrow to initiate a hold cycle.
- Within a short amount of time, visually confirm the IR bulb comes on.

DIAGNOSTICS

The temperature control performs a routine, internal check after turning the unit on to validate the unit is sensing temperature and heating properly. In the event of a problem, an error will display on the timer bar.

BULB – IR BULB CIRCUIT FAULT

- Indicates a fault with a specified IR Bulb circuit. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault.

HIGH – OVER-TEMPERATURE FAULT

- Indicates a fault with a heating circuit component. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault.

LOW – UNDER-TEMPERATURE FAULT

- Indicates a fault with a heating circuit component. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault.

SENS – SENSOR FAULT

- May indicate the unit has been programmed improperly (i.e. loading a 2x4 product configuration file into a 2x2 unit). An attempt to properly reprogram the unit should be made.
- May indicate a fault with a heat sink temperature sensor. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault

TEMPERATURE CHECK PROCEDURE

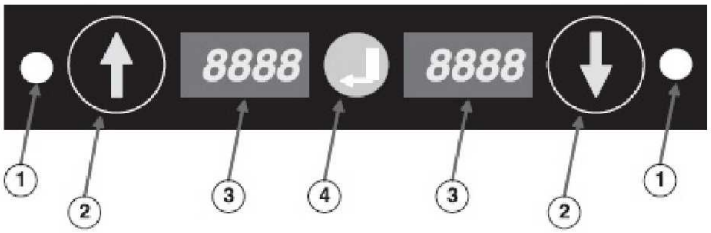
1. A digital temperature meter that has been calibrated must be used to get an accurate temperature reading. Use a thermocouple surface temperature probe to measure temperatures.
2. **No pans should be in wells during the pre-heat and temperature check.** Pre-heat the warmer for 30 minutes before taking any temperature readings. Do not take readings unless the cavity has been empty for 30 minutes. This will allow the temperature to stabilize and will prevent false readings.
3. The warmer cavity should be cleaned and empty before the temperature is checked. Avoid any air drafts that might flow through the cavity.
4. Locate the surface temperature probe on the bottom of the first cavity as shown for the cabinet size.
5. All temperature controls exhibit a swing in temperature as the control cycles on and off while regulating to the set point. The correct calibration temperature is the average of several readings taken over a period of 20 minutes after the warmer has been pre-heated. The average temperature should be ± 5°F from the set point.

OPERATING INSTRUCTIONS

OPERATION - OPERATING PROCEDURE

- Ensure proper heat sink covers are inserted into the correct location (broiled and moisture sensitive products only).
- Upon turning ON, allow the holding unit to heat for at least 30 minutes or until the temperature disappears and the timer bars display the pre-programmed product names.
- If the timer bars display temperature at any time after the preheat period, discontinue use of the affected pan location(s) until the holding unit can be serviced.

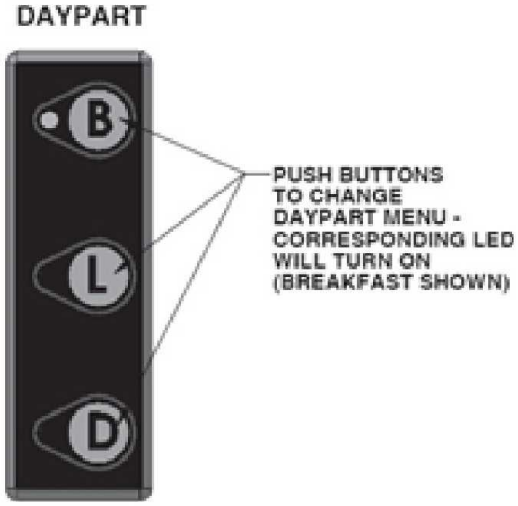
OPERATION – TIMER BAR FUNCTIONALITY



1. Status LEDs: Used for indicating status of pan.
   a. Non-Illuminated -Timer is Inactive – no product in pan
   b. GREEN – Timer is Active – product in pan (use first)
   c. FLASHING GREEN = Cook Warning Time reached (cook more product) or keypad in EDIT MODE (programming)
2. Arrow Buttons
   a. Used for Starting / Stopping / Resetting Timer.
   b. Used to access MENU MODE.
   c. Indicate which pan the adjacent Status LED and Pan Display are linked to.
3. Pan Display
   a. Displays Product Name and Hold Time Remaining (alternates between the two when Timer is active).
4. Enter Button
   a. Used to access MENU MODE.

OPERATION – CHANGE DAYPARTS

Select the appropriate Daypart Button to switch between Breakfast, Lunch, and Dinner menus.



Once to temperature, product names can be viewed on the displays. Additional settings such as LINK, TIME, and TEMP can be viewed two different ways.

- Manually accessing Menu Mode through Timer Bars
- Uploading unit settings from the Duke Holding Unit to a USB Drive and viewing via the Internet.

SETTINGS – CHECKING PRODUCT SETTINGS (MENU MODE)

Enter Menu Mode

1. Press and hold the ENTER Button for three seconds. Status LED FLASHES and "MENU" is displayed on left Display and either "UP" or "DOWN" is displayed on the right display, indicating which pan location information will be displayed.



2. After selecting the UP or DOWN Arrow, press the ENTER Button to accept.

MENU MODE – MANUAL ALTERNATIVE TO CHANGE DAYPART

1. Status LED stops flashing and "MEAL SET1" appears on the Display.



2. Press the ENTER Button again. Status LED FLASHES indicating Edit Mode.



3. Use the Arrow Buttons to scroll to desired Daypart (i.e. "MEAL SET2", MEAL SET3") and press the ENTER Button to accept.
4. Status LED stops flashing, "UPDATING" is displayed for a few seconds, and then the desired Daypart ("MEAL SET") is displayed.



MENU MODE – DISPLAY LINK, HOLD TIME, TEMPERATURE

1. Press the UP Arrow Button repeatedly to scroll up or down through "LINK", "TIME", and "TEMP". The DOWN Arrow button can be used to cycle the opposite direction.



This indicates all products named BURG are linked pan locations.



This indicates the hold time for BURG.



This indicates the Heat Sink Temperature for BURG.

EXIT MENU MODE

1. Press the UP Arrow Button one last time to scroll to "EXIT" and press the ENTER Button to exit Menu Mode.



SETTINGS – CHECKING PRODUCT SETTINGS (VIA USB FILE)

USB File Upload from Unit

1. Turn IRHS ON and wait for temperature or product names to display.
2. Insert a BLANK USB Drive into the USB port. USB Port LED will light solid green and a single chirp should be heard.
3. Display will go blank and USB Port LED will begin flashing green.
4. A second chirp should be heard, USB Port LED will return to solid green.
5. File has successfully uploaded from IRHS to USB Drive.
6. Remove USB Drive from Port.
7. Refer to STEP 2 in the Programming section to view file on the Internet.

CHECK – HEAT SINK TEMPERATURE & IR BULB FUNCTION CHECK

Heat sink surface

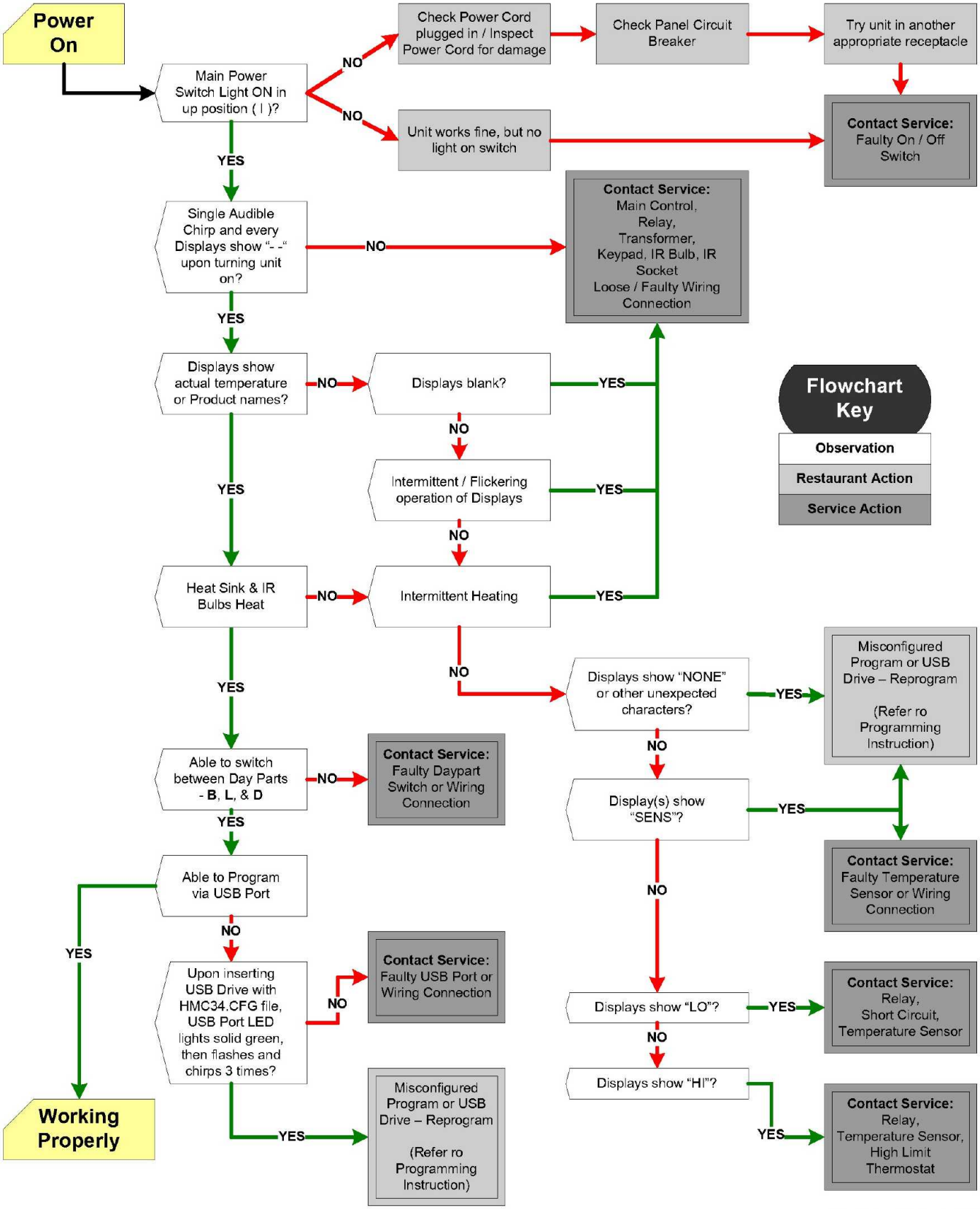
- A surface temperature probe can be used to check the temperature of the heat sink surface.
- No pans should be in wells during the pre-heat and temperature check period. Pre-heat the holding unit for 30 minutes before taking any temperature readings.
- Ensure the pan location being measured is not in a hold cycle mode (timing down).
- Locate the surface temperature probe in the geometric center of the desired pan location. Make sure the probe is making good contact with the surface while taking readings.
- The temperature control will exhibit a swing in temperature as the control cycles on and off while regulating to the set point temperature. The average of several readings taken should be +/- 5°F from the set point.
- Compare the measured temperature to the programmed heat sink set point (TEMP) for the specified pan location.

PARTS LISTS AND ILLUSTRATIONS

			Qty Per Unit			
Locator	P/N	Description	IRHS-22	IRHS-23	IRHS-24	IRHS-34

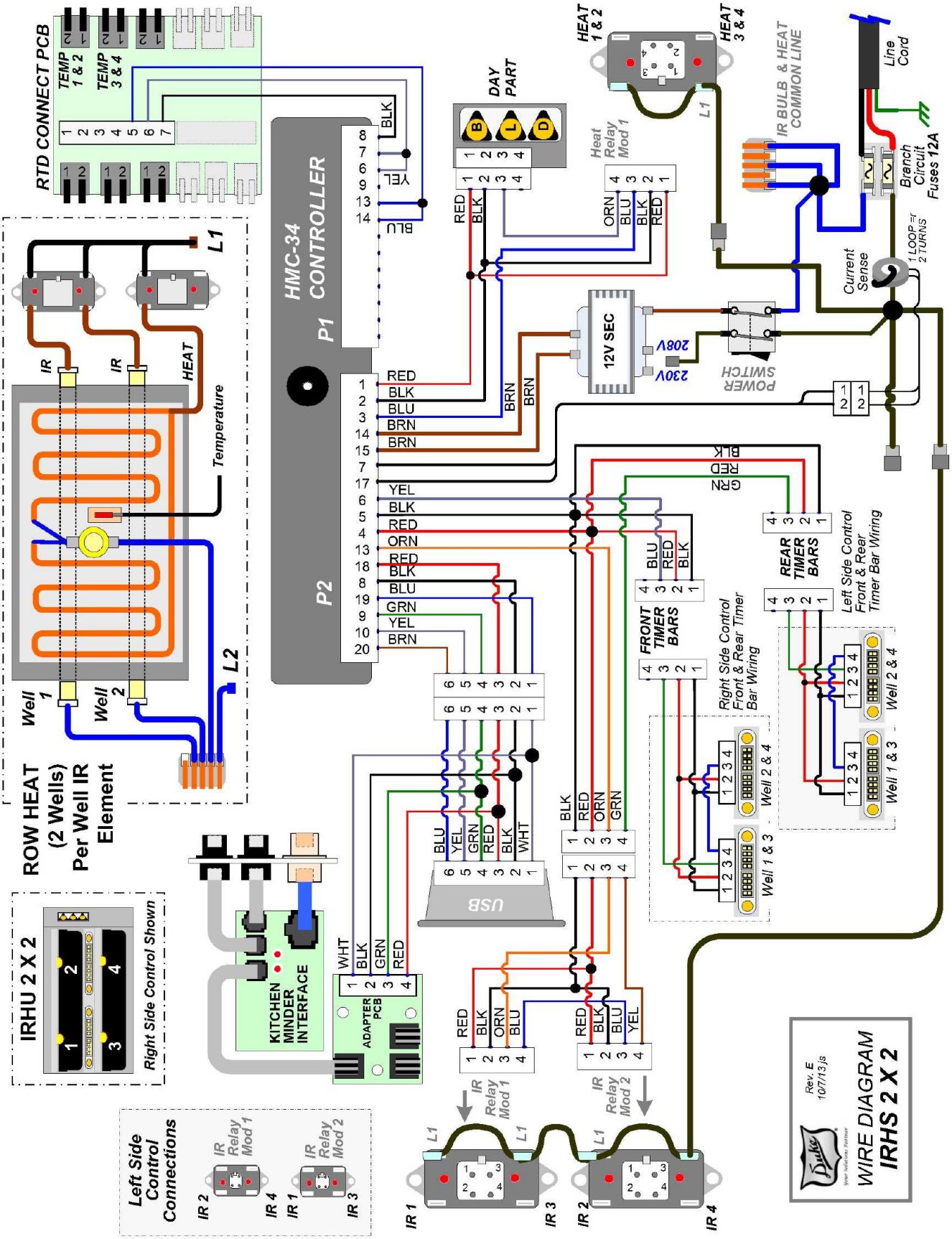
TROUBLE SHOOTING

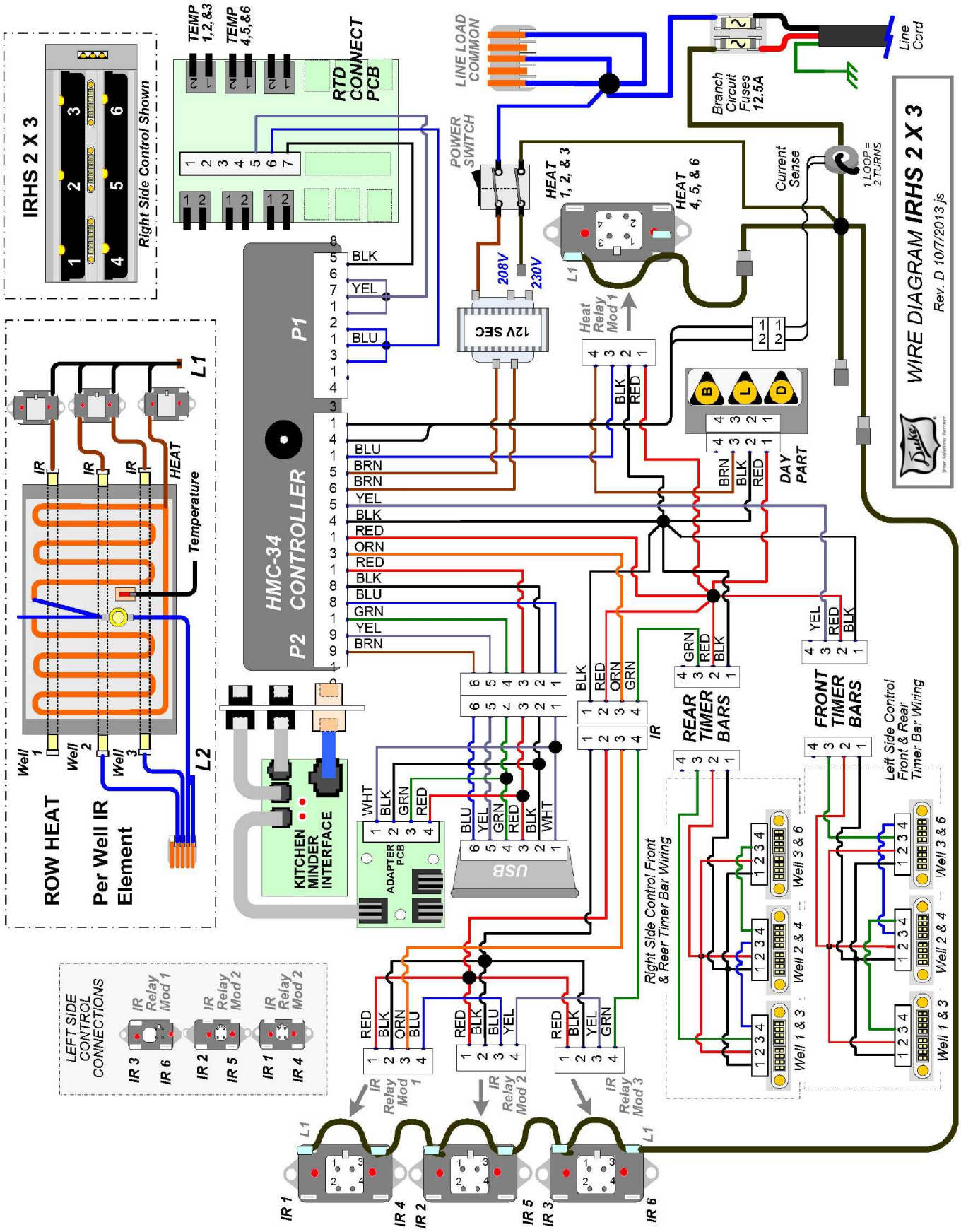
IRHS Troubleshooting

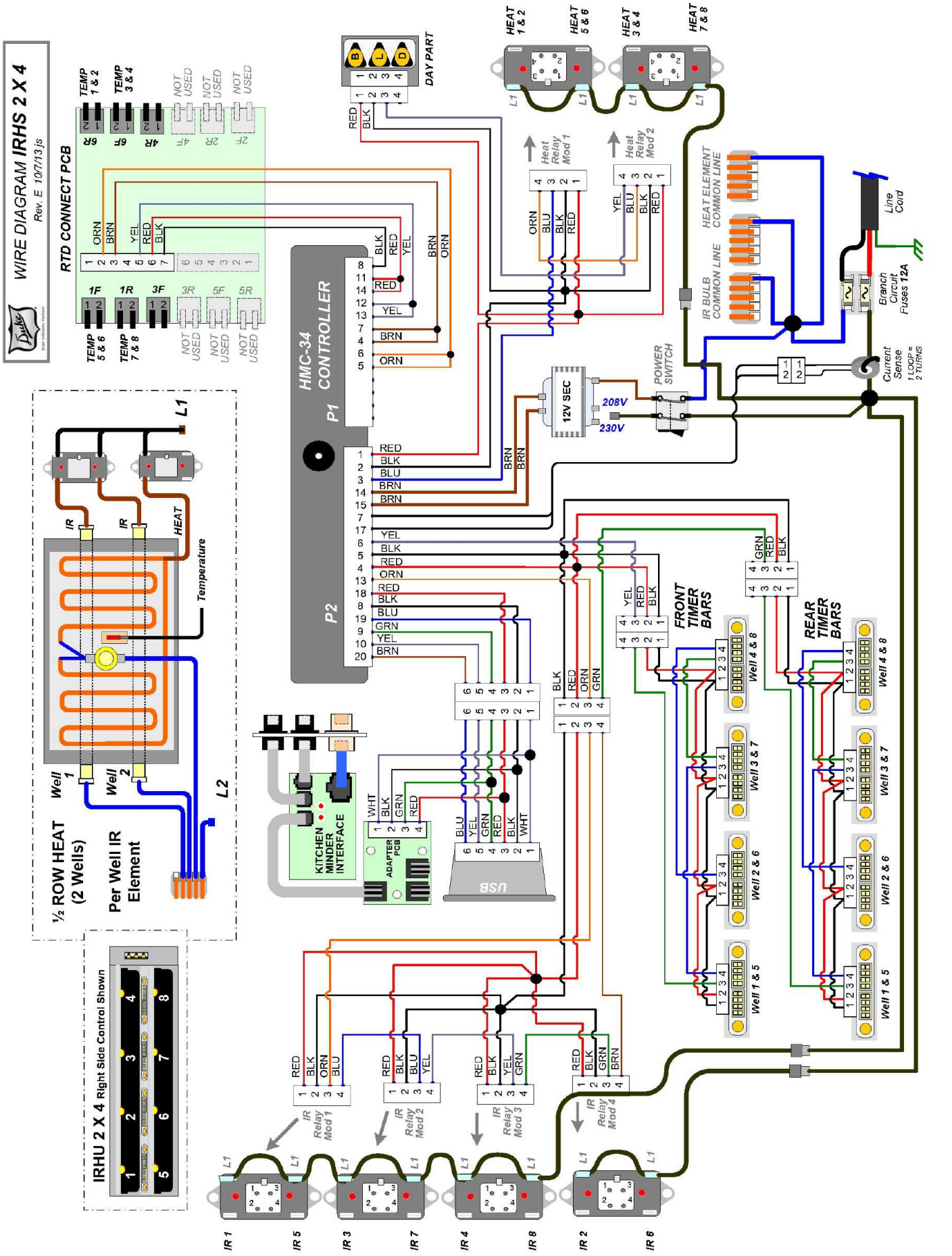


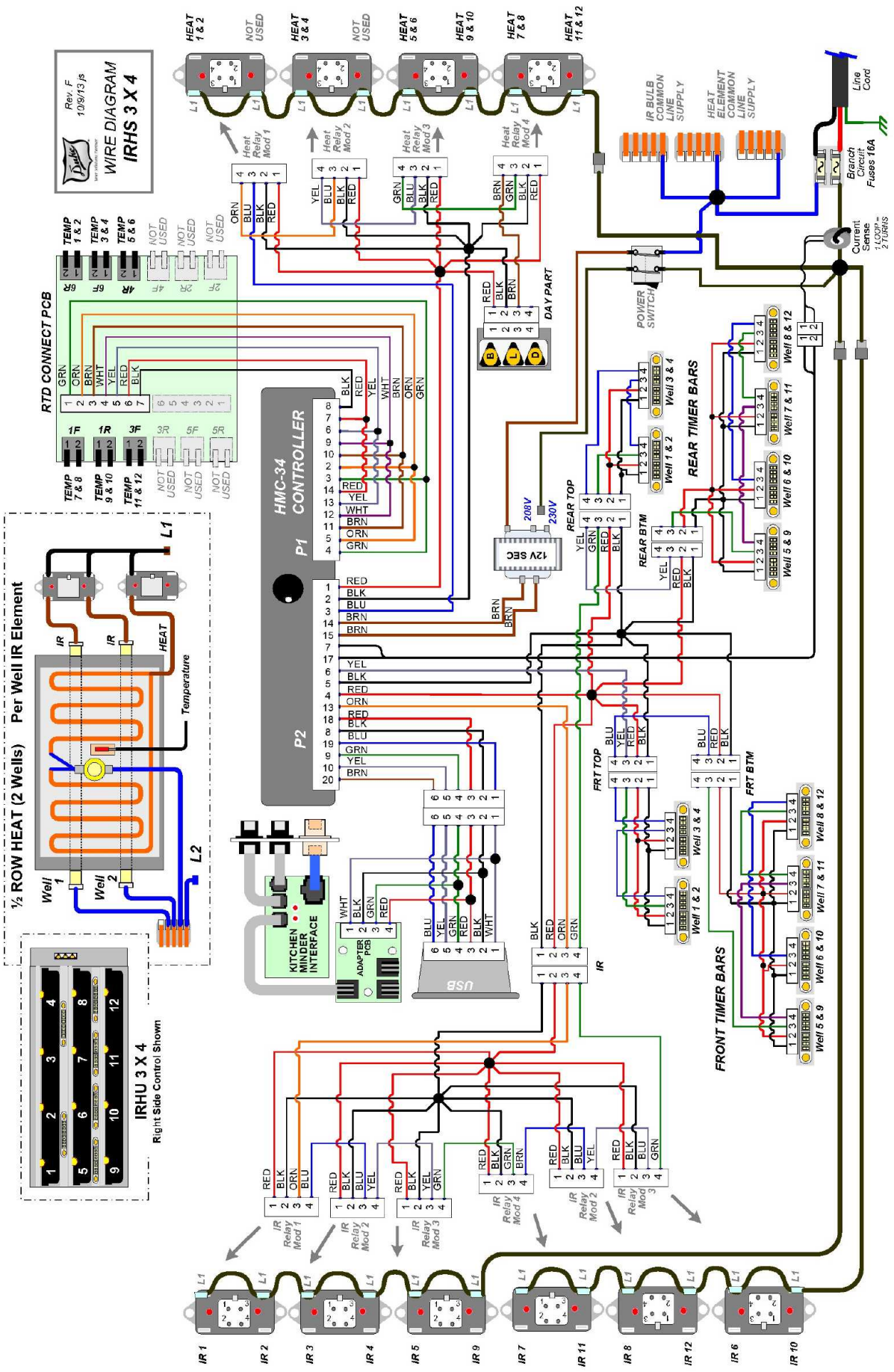
Revision Date 10/2/13

WIRING SCHEMATICS

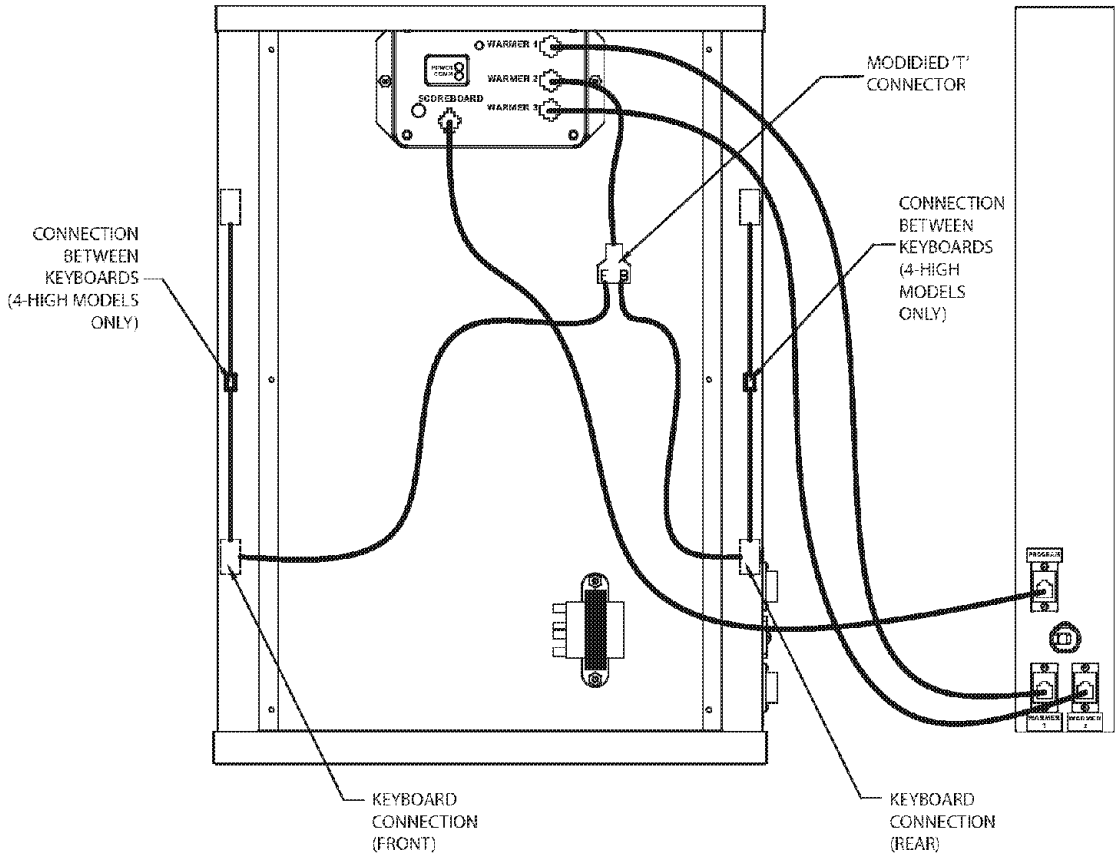



IRHS 2 X 3
Right Side Control Shown
TEMP 1,2,&3
TEMP 4,5,&6
RTD CONNECT PCB
LINE LOAD COMMON
POWER SWITCH
HEAT 1, 2, & 3
HEAT 4, 5, & 6
Current Sense
1 LOOP = 2 TURNS
Branch Circuit Fuses 12.5A
Line Cord
208V
230V
12V SEC
Heat Relay Mod 1
HMC-34 CONTROLLER
P1
P2
BLK
YEL
BLU
BRN
RED
ORN
GRN
WHT
B
L
D
DAY PART
WIRE DIAGRAM IRHS 2 X 3
Rev. D 10/7/2013 js
ROW HEAT
Per Well IR Element
Well 1
Well 2
Well 3
IR
HEAT
Temperature
L1
L2
KITCHEN MINDER INTERFACE
ADAPTER PCB
USB
REAR TIMER BARS
FRONT TIMER BARS
Left Side Control Front & Rear Timer Bar Wiring
Right Side Control Front & Rear Timer Bar Wiring
Well 1 & 3
Well 2 & 4
Well 3 & 6
LEFT SIDE CONTROL CONNECTIONS
IR Relay Mod 1
IR Relay Mod 2
IR Relay Mod 3
IR 1
IR 2
IR 3
IR 4
IR 5
IR 6

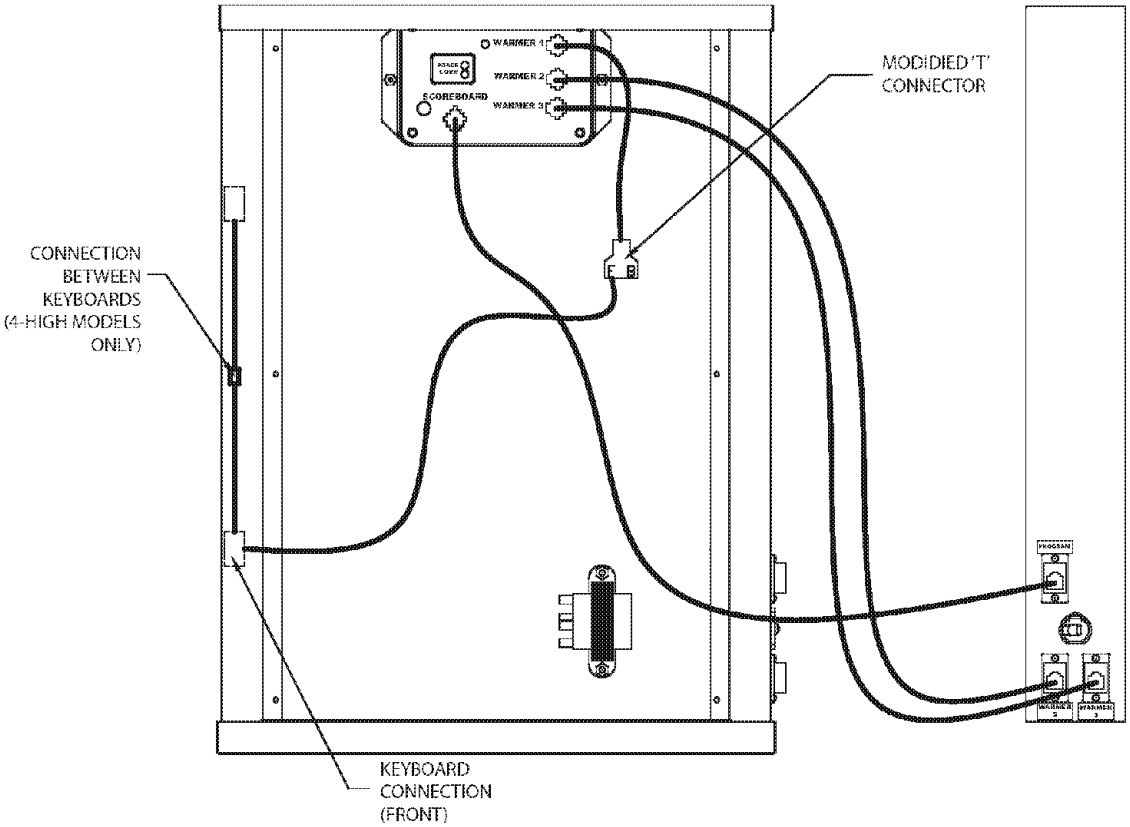

WIRE DIAGRAM IRHS 2 X 4
Rev. E 10/7/13 js
RTD CONNECT PCB
TEMP 1 & 2
TEMP 3 & 4
TEMP 5 & 6
TEMP 7 & 8
NOT USED
1F
1R
3F
3R
5F
5R
DAY PART
HEAT 1 & 2
HEAT 5 & 6
HEAT 3 & 4
HEAT 7 & 8
HMC-34 CONTROLLER
P1
P2
Heat Relay Mod 1
Heat Relay Mod 2
HEAT ELEMENT COMMON LINE
IR BULB COMMON LINE
Line Cord
Branch Circuit Fuses 12A
Current Sense
1 LOOP = 2 TURNS
POWER SWITCH
12V SEC
208V
230V
½ ROW HEAT (2 Wells)
Per Well IR Element
Well 1
Well 2
IR
HEAT
Temperature
L1
L2
KITCHEN MINDER INTERFACE
ADAPTER PCB
USB
FRONT TIMER BARS
REAR TIMER BARS
Well 1 & 5
Well 2 & 6
Well 3 & 7
Well 4 & 8
IRHU 2 X 4 Right Side Control Shown
IR Relay Mod 1
IR Relay Mod 2
IR Relay Mod 3
IR Relay Mod 4
IR 1
IR 5
IR 3
IR 7
IR 4
IR 8
IR 2
IR 6


Rev. F
10/9/13 js
WIRE DIAGRAM
IRHS 3 X 4
HEAT 1 & 2
NOT USED
HEAT 3 & 4
NOT USED
HEAT 5 & 6
HEAT 9 & 10
HEAT 7 & 8
HEAT 11 & 12
IR BULB COMMON LINE SUPPLY
HEAT ELEMENT COMMON LINE SUPPLY
Line Cord
Branch Circuit Fuses 16A
Current Sense 1 LOOP = 2 TURNS
POWER SWITCH
RTD CONNECT PCB
TEMP 1 & 2
TEMP 3 & 4
TEMP 5 & 6
TEMP 7 & 8
TEMP 9 & 10
TEMP 11 & 12
HMC-34 CONTROLLER
P1
P2
DAY PART
12V SEC
208V
230V
REAR TOP
REAR BTM
REAR TIMER BARS
Well 3 & 4
Well 1 & 2
Well 8 & 12
Well 7 & 11
Well 6 & 10
Well 5 & 9
FRT TOP
FRT BTM
FRONT TIMER BARS
IR
½ ROW HEAT (2 Wells) Per Well IR Element
L1
L2
IR
HEAT
Temperature
Well 1
Well 2
KITCHEN MINDER INTERFACE
ADAPTER PCB
USB
IRHU 3 X 4
Right Side Control Shown
IR Relay Mod 1
IR Relay Mod 2
IR Relay Mod 3
IR Relay Mod 4
IR 1
IR 2
IR 3
IR 4
IR 5
IR 9
IR 7
IR 11
IR 8
IR 12
IR 6
IR 10

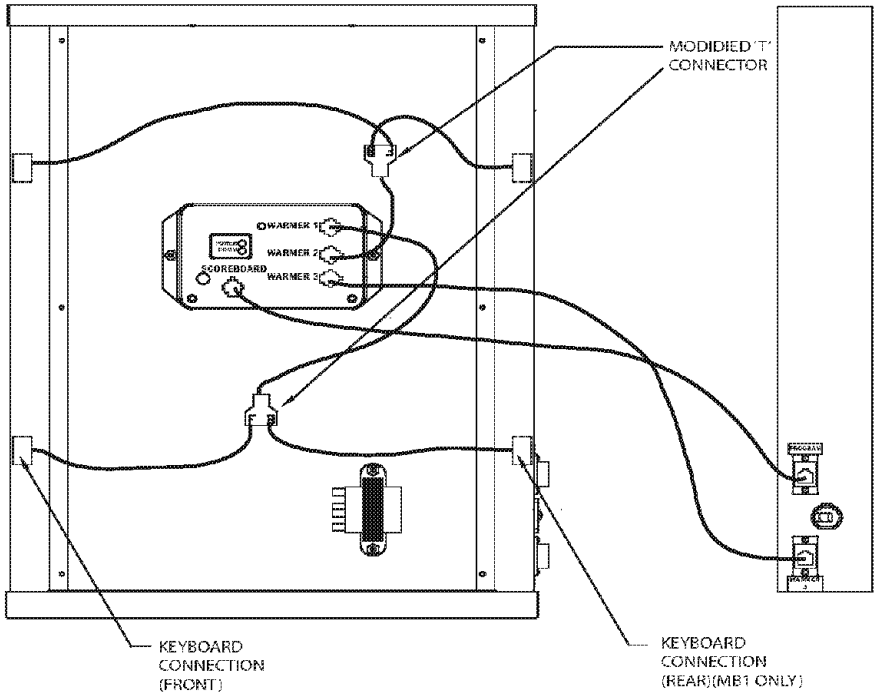
Interface Cable Wiring Schematics



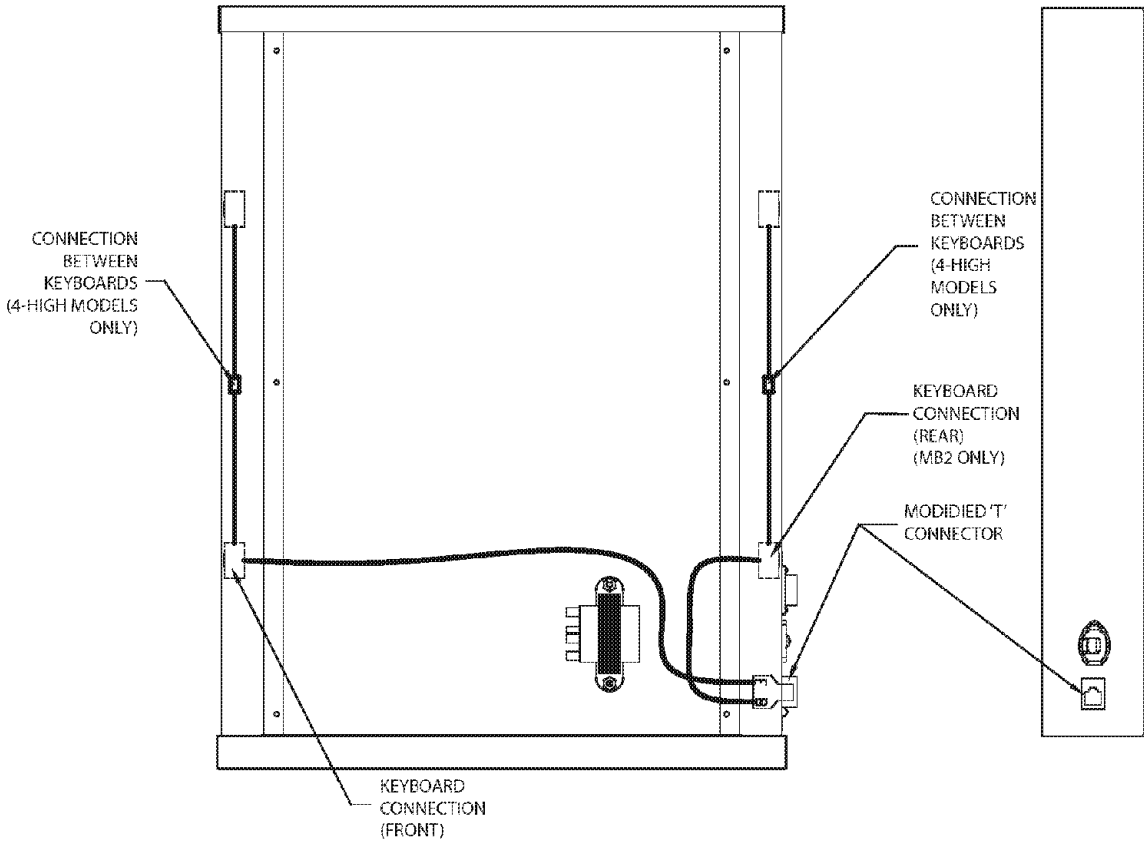
FWM3 - 2 High/4 High MB1 Interface Cable Schematic



FWM3 - 2 High/4 High SB1 Interface Cable Schematic



FWM3-34 MB1 & SB1Interface Cable Schematic



FWM3 - 2 High/3 High/4 High MB2 & SB2 Interface Cable Schematic



Your Solutions Partner

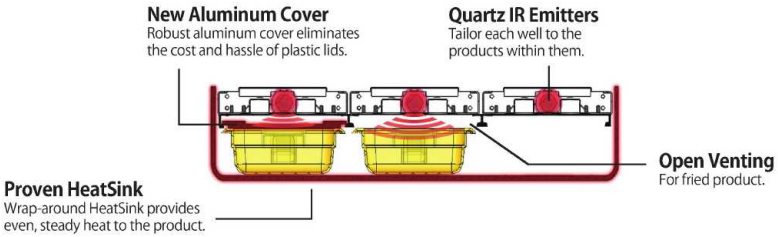
Duke Manufacturing Co.

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

www.dukemfg.com

InfraRed HeatSink™ (IRHS)

Turbo Boost your product temperatures and your profits.



Technology – for consistently HOT product.
- Dual holding technologies, InfraRed and HeatSink, built to last with a heavy, durable construction
- Prevent grease migration and performance degradation with a solid-state, fanless design, extended HeatSink and fully sealed cavity with no openings
- Heavy, robust individual aluminum covers with better heat transfer and greater seal assurance; critical to maintain food quality with extended hold times
- Utilize "Turbo Boost" for an instant shot of heat to boost food temperature for hot, consistent food
- Robust timer bars with a proven track record
- Improve operations with more product information at each well
- Quickly and easily load new menu sets via USB
- Eliminate faceplate cracks with new stainless faceplate

Profit
- Drastic improvement in food temperatures- always hot, always consistent
- Unlimited flexibility for current and future menu.
- Hold any food item in any well, knowing that it is in an optimized holding environment tailored to that product
- Significantly extended hold times across the menu, including fried foods
- Energy efficient technology that utilizes idle mode and does not force hot air into kitchen
- Roll out future menu items and LTO's seamlessly without requiring new or specialized holding equipment

Kitchen Integration
- Web programming to quickly and easily customize configurations
- Connect to your kitchen management system
- Reduced footprint allows IRHS to fit into smaller spaces
- Plug-and-play electric configurations means the IRHS can replace your old PHU without new wiring
- Enhance your overall restaurant performance, improve GUESTTRAC Score and Speed of Service times

Eliminate Temperature Differential



OLD: HeatSink™ Only **NEW:** HeatSink™ and InfraRed



Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

DUKE MANUFACTURING CO.
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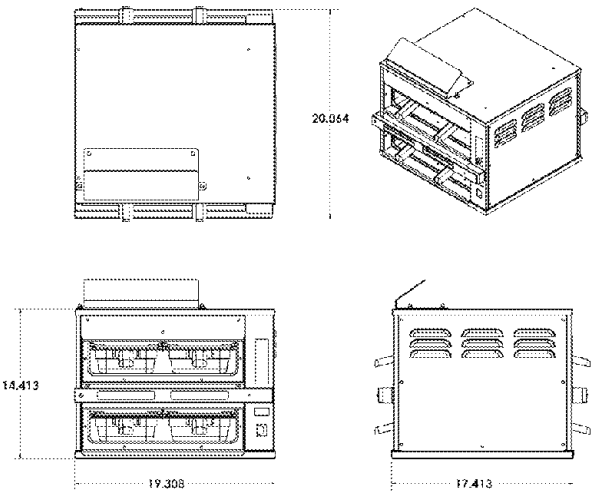
SHORT FORM SPECIFICATIONS:

Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

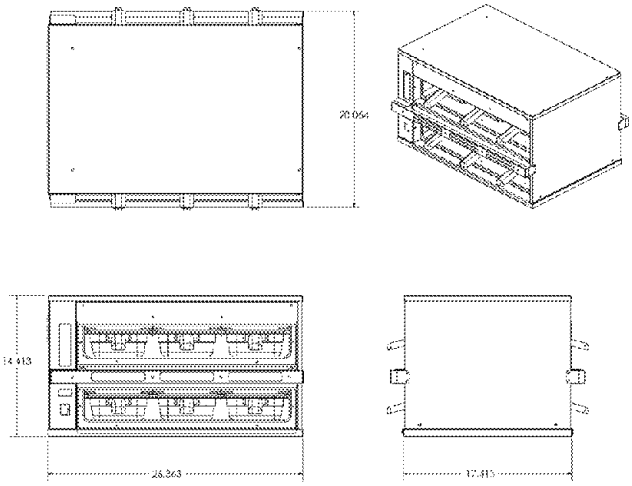
DRAFT

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS: FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

EPEDITE COUNTER

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800.231.1130 In Missouri
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Specification subject to change

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E-MAIL 5

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 1/21/2014 6:11:21 PM
To: Bader, Craig [Craig.Bader@idq.com]
CC: Hitchler, Ann [Ann.Hitchler@idq.com]
Subject: RE: DQ unit to test
Attachments: Duke IRHS Spec Sheet.pdf

Craig –

Just as I thought that unit is the prototype version so I will ship you a new production model. The lead time is usually 2 – 3 weeks.

On these new units, vending is accomplished by using an aluminum lid for moisture foods and no lid for crispy. The aluminum lids are new for the production unit. The production unit only uses the standard 2.5" deep pans that are currently in the system.

I have attached the spec sheet for the electrical – your IRHS-24-208 will use a 6-15P plug.

Once you receive the new production unit, we will set up a call so I can introduce you to the unit.

Please keep all the metal drain trays. I will send new pans and aluminum lids with the new unit.

Thank you.

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM



WWW.DUKEMFG.COM

From: Bader, Craig [mailto:Craig.Bader@idq.com]
Sent: Tuesday, January 21, 2014 9:45 AM
To: John Ulrich
Cc: Hitchler, Ann
Subject: DQ unit to test

Hi John;
As we discussed, attached are 3 photos of the unit we have in house, including the serial #.

One photo is of the pans we have, so you can verify if that is the current spec.

Other questions:

- Can you verify the venting in the pans for fried products? This could be a critical question regarding the ability to hold fried foods.
- Will we need a new unit – and what the expected timeline would be
- Does the new unit need special electrical

I've copied Ann Hitchler, who I'll be working with in our testing phase. As we get more organized we may want to have a call or visit with you to review the details.

Thanks John.

CRAIG BADER
Project Manager
American Dairy Queen
952-830-0435

-----Original Message-----
From: Bader, Craig
Sent: Tuesday, January 21, 2014 9:35 AM
To: Bader, Craig
Subject:

IDQ Companies DISCLAIMER:
This transmission is intended only for the person named above and may contain privileged, confidential or proprietary business information. Please notify me immediately by phone or e-mail, if you have received this transmission in error. If you have received this in error, copying, distributing, or any disclosure of this transmission and its contents is prohibited and may be unlawful. Thank you for your assistance and I apologize for any inconvenience.

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

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IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

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- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

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314.231.5074 Fax
www.dukemfg.com

SHORT FORM SPECIFICATIONS:

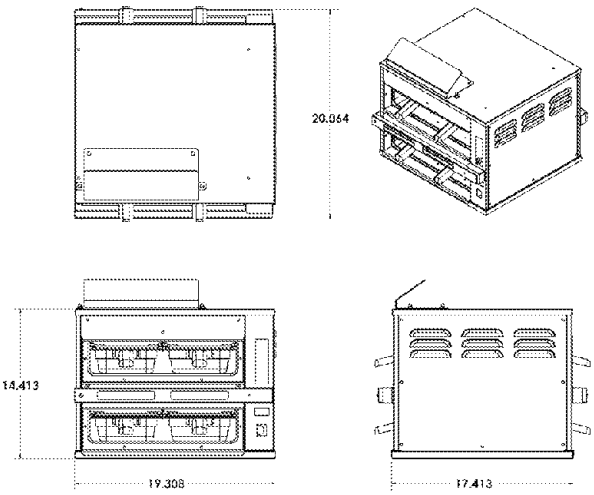
Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

DRAFT

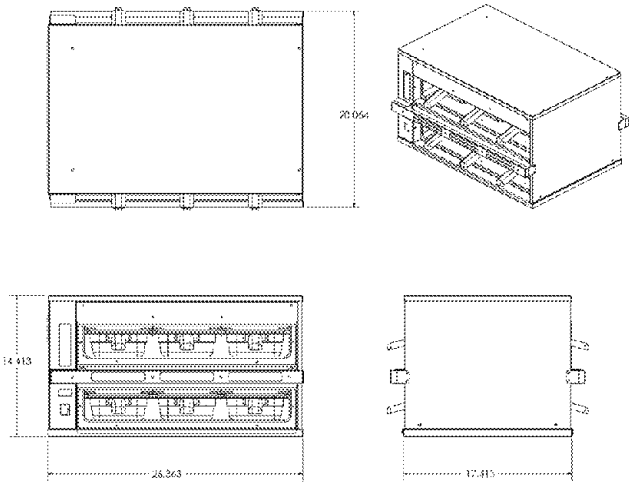
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

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IRHS-23	2 down, 3 across
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IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS: FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

EPEDITE COUNTER

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Specification subject to change

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Printed in U.S.A

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E-MAIL 6

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 2/12/2014 12:57:31 PM
To: Patricia Tolie [ptolie@dukemfg.com]; Mary Roberts [mary@pmreps.com]
CC: PMR Orders [pmrorders@pmreps.com]
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook
Attachments: Duke IRHS Spec Sheet.pdf; Duke IRHS Marketing Flyer.pdf

Trish and Mary –

If their food product is small enough to fit into a third-pan, I would prefer that we introduce the new combination HeatSink / IRHS unit instead of the full-pan IRHU. The IRHS is the new unit and has much more flexibility and support. Please see attached for more information. If all holding is in one place, you can use one 12-pan unit.

None of Duke's holding units are good for French fries, so at this point, look at a Hatco piece. Duke is developing a fry holding unit but it is not quite available.

The best approach is to have Mary call me at 314-614-6344 to discuss so I have a better understanding of the situation.

Thank you!

John

From: Patricia Tolie
Sent: Tuesday, February 11, 2014 1:05 PM
To: John Ulrich
Cc: Mary Roberts; PMR Orders
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook

John

Any suggestions on this

John

Can you suggest what units could be quoted per requirements

Chain/Core Chain Order Coordinator
Duke Mfg.
2305 N. Broadway
St. Louis, MO 63102
800-735-3853 ext. 247

From: PMR Orders [mailto:pmrorders@pmreps.com]
Sent: Tuesday, February 11, 2014 8:45 AM
To: Patricia Tolie
Cc: Mary Roberts
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook
Importance: High

Trish: In the larger unit where they wanted the infrared, they will be holding fried foods like fish, french frys, etc & the smaller unit they will be holding sides. So, the 2 x 3 with the deeper pans & whichever HSHU unit that holds 4 pans. Does this sound right to you Mary?

Thanks,

Sarah
PMR Orders
1305 Lakes Parkway
Suite 106
Lawrenceville, GA 30043
770-441-3100

Check your order anytime of the day or night, 7 days a week by going to the following links:

Blodgett: http://www.blodgett.com/order_status.htm
Duke: http://216.43.59.190/e9/?action=logoff
Hatco: https://www2.hatcocorp.com/RegUser/OpenLogin.do
MagiKitch'n: http://www.magikitchn.com/OrderInqEquip.asp
Pitco: http://www.pitco.com/OrderInqEquip.asp

From: Patricia Tolie [mailto:ptolie@dukemfg.com]
Sent: Monday, February 10, 2014 1:27 PM
To: PMR Orders
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook

We also have a deep phu that can be used also

Chain/Core Chain Order Coordinator
Duke Mfg.
2305 N. Broadway
St. Louis, MO 63102
800-735-3853 ext. 247

From: PMR Orders [mailto:pmrorders@pmreps.com]
Sent: Monday, February 10, 2014 12:21 PM

To: Patricia Tolie
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook
Importance: High

Ok Trish, here is what they're asking for now:

1. Infrared unit
6 pans total
3 x 3
Larger pans
208/1
NOT a pass-thru
Qty 1

2. Heat sink unit
4 pans total
2 x 2
1/3 size pans
208/1
NOT a pass-thru
Qty 1

Thanks,

Sarah
PMR Orders
1305 Lakes Parkway
Suite 106
Lawrenceville, GA 30043
770-441-3100



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Pitco: http://www.pitco.com/OrderInqEquip.asp

From: Patricia Tolie [mailto:ptolie@dukemfg.com]
Sent: Monday, February 10, 2014 11:40 AM
To: PMR Orders
Subject: RE: Duke Holding Unit-Quote Needed

Ok waiting on John anyway-let me know

Chain/Core Chain Order Coordinator
Duke Mfg.
2305 N. Broadway
St. Louis, MO 63102

800-735-3853 ext. 247

From: PMR Orders [mailto:pmrorders@pmreps.com]
Sent: Monday, February 10, 2014 10:03 AM
To: Patricia Tolie
Subject: FW: Duke Holding Unit-Quote Needed
Importance: High

Trish: Put a hold on this as I was just informed that it is changing.

Thanks,

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PMR Orders
1305 Lakes Parkway
Suite 106
Lawrenceville, GA 30043
770-441-3100

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MagiKitch'n: http://www.magikitchn.com/OrderInqEquip.asp
Pitco: http://www.pitco.com/OrderInqEquip.asp

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Sent: Monday, February 10, 2014 8:06 AM
To: 'Patricia Tolie'
Subject: FW: Duke Holding Unit-Quote Needed

Trish: Our sales person in Alabama is working with Specialty Eq. on a small chain called Off The Hook. They need a quote on the following:
1. Pass thru infrared holding
6 bays – large pan
208/1

2. Pass thru infrared holding
8 bays – smaller 1/3 size pan
208/1

Thanks,

Sarah
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Suite 106
Lawrenceville, GA 30043
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MagiKitch'n: http://www.magikitchn.com/OrderInqEquip.asp
Pitco: http://www.pitco.com/OrderInqEquip.asp

From: Mary Roberts
Sent: Friday, February 07, 2014 4:10 PM
To: PMR Orders
Subject: FW: Duke Holding Unit

I need a quote for an emerging small chain.
Dealer is Tony Diez – Specialty Equipment
Email is tonydiez@cableone.net
Job Name: Off the Hook

Attached is the Duke spec sheet for reference.

1. Pass thru infrared holding
6 bays – large pan
208/1

2. Pass thru infrared holding
8 bays – smaller 1/3 size pan
208/1

1 each.
Thanks!

From: Derinda Butler
Sent: Friday, February 07, 2014 2:43 PM
To: Mary Roberts
Subject: FW: Duke Holding Unit

He may be calling you.

Derinda Butler
PMR Distributing
1305 Lakes Parkway, Ste. 106
Lawrenceville GA 30043
(770) 817-7601 - Direct
(770) 449-6834 - Fax
www.pmreps.com



From: Derinda Butler
Sent: Friday, February 07, 2014 10:53 AM
To: tonydiez@cableone.net
Subject: Duke Holding Unit

Tony,

I have attached a spec sheet on an Infrared Holding Unit manufactured by Duke. If this could work, please contact Mary Roberts at (205) 552-2571, and she will be able to assist.

Thanks,

Derinda Butler
PMR Distributing
1305 Lakes Parkway, Ste. 106
Lawrenceville GA 30043
(770) 817-7601 - Direct
(770) 449-6834 - Fax
www.pmreps.com



Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

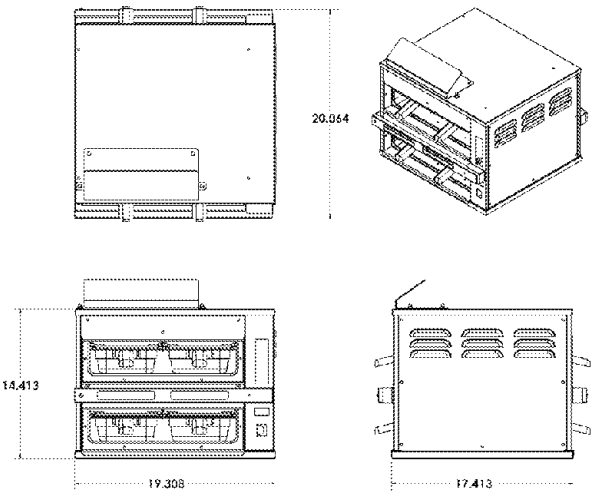
SHORT FORM SPECIFICATIONS:

Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

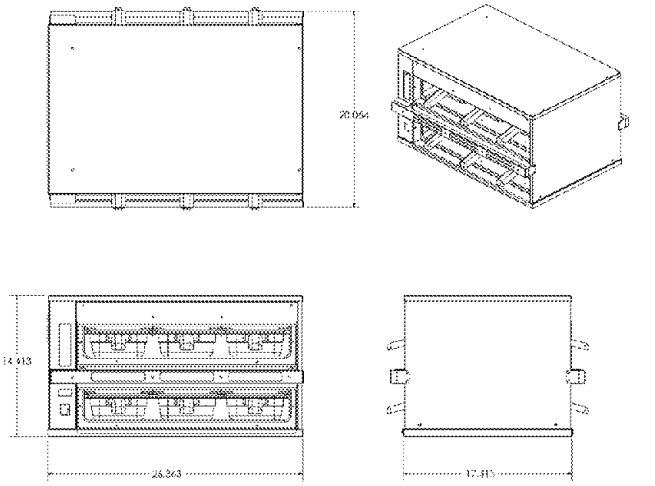
DRAFT

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

EPEDITE COUNTER

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
800.231.1130 In Missouri
314.231.5074 Fax
www.dukemfg.com

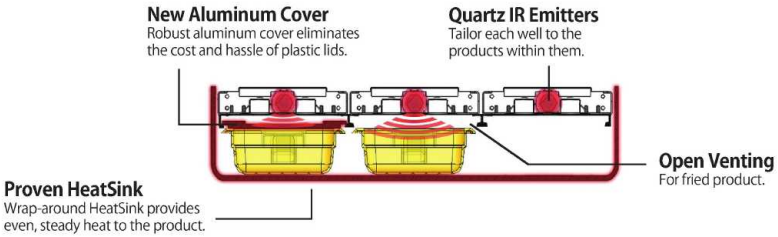
Your Solutions Partner

Specification subject to change

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InfraRed HeatSink™ (IRHS)

Turbo Boost your product temperatures and your profits.



Technology – for consistently HOT product.
- Dual holding technologies, InfraRed and HeatSink, built to last with a heavy, durable construction
- Prevent grease migration and performance degradation with a solid-state, fanless design, extended HeatSink and fully sealed cavity with no openings
- Heavy, robust individual aluminum covers with better heat transfer and greater seal assurance; critical to maintain food quality with extended hold times
- Utilize "Turbo Boost" for an instant shot of heat to boost food temperature for hot, consistent food
- Robust timer bars with a proven track record
- Improve operations with more product information at each well
- Quickly and easily load new menu sets via USB
- Eliminate faceplate cracks with new stainless faceplate

Profit
- Drastic improvement in food temperatures- always hot, always consistent
- Unlimited flexibility for current and future menu.
- Hold any food item in any well, knowing that it is in an optimized holding environment tailored to that product
- Significantly extended hold times across the menu, including fried foods
- Energy efficient technology that utilizes idle mode and does not force hot air into kitchen
- Roll out future menu items and LTO's seamlessly without requiring new or specialized holding equipment

Kitchen Integration
- Web programming to quickly and easily customize configurations
- Connect to your kitchen management system
- Reduced footprint allows IRHS to fit into smaller spaces
- Plug-and-play electric configurations means the IRHS can replace your old PHU without new wiring
- Enhance your overall restaurant performance, improve GUESTTRAC Score and Speed of Service times

Eliminate Temperature Differential



OLD: HeatSink™ Only **NEW:** HeatSink™ and InfraRed



E-MAIL 7

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 2/14/2014 8:31:23 PM
To: Mary Roberts [mary@pmreps.com]
CC: Patricia Tolie [ptolie@dukemfg.com]; PMR Orders [pmrorders@pmreps.com]
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook
Attachments: Duke IRHS Spec Sheet.pdf; Duke IRHS Marketing Flyer.pdf

Mary –

All units have single sided controls:

IRHS-24-208 (eight third-size pans) = $4750
IRHS-34-208 (twelve third-size pans) = $5950

Pans are sold separately @ $24 each.

Thank you.

John

From: Mary Roberts [mailto:mary@pmreps.com]
Sent: Friday, February 14, 2014 2:04 PM
To: John Ulrich
Cc: Patricia Tolie; PMR Orders
Subject: Re: Duke Holding Unit-Quote Needed - Off The Hook

Trisha - Do you have an ETA on this quote? The dealer keeps calling me. Thank you

Mary Roberts

(205) 552-2571

mary@pmreps.com

On Feb 12, 2014, at 6:57 AM, "John Ulrich" <julrich@dukemfg.com> wrote:

Trish and Mary –

If their food product is small enough to fit into a third-pan, I would prefer that we introduce the new combination HeatSink / IRHS unit instead of the full-pan IRHU. The IRHS is the new unit and has much more flexibility and support. Please see attached for more information. If all holding is in one place, you can use one 12-pan unit.

None of Duke's holding units are good for French fries, so at this point, look at a Hatco piece. Duke is

developing a fry holding unit but it is not quite available.

The best approach is to have Mary call me at 314-614-6344 to discuss so I have a better understanding of the situation.

Thank you!

John

From: Patricia Tolie
Sent: Tuesday, February 11, 2014 1:05 PM
To: John Ulrich
Cc: Mary Roberts; PMR Orders
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook

John

Any suggestions on this

John

Can you suggest what units could be quoted per requirements

Chain/Core Chain Order Coordinator
Duke Mfg.
2305 N. Broadway
St. Louis, MO 63102
800-735-3853 ext. 247

From: PMR Orders [mailto:pmrorders@pmreps.com]
Sent: Tuesday, February 11, 2014 8:45 AM
To: Patricia Tolie
Cc: Mary Roberts
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook
Importance: High

Trish: In the larger unit where they wanted the infrared, they will be holding fried foods like fish, french frys, etc & the smaller unit they will be holding sides. So, the 2 x 3 with the deeper pans & whichever HSHU unit that holds 4 pans. Does this sound right to you Mary?

Thanks,

Sarah
PMR Orders
1305 Lakes Parkway
Suite 106
Lawrenceville, GA 30043
770-441-3100

[cid:image001.png@01CF2705.B165EB00]

Check your order anytime of the day or night, 7 days a week by going to the following links:

Blodgett: http://www.blodgett.com/order_status.htm
Duke: http://216.43.59.190/e9/?action=logoff
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MagiKitch'n: http://www.magikitchn.com/OrderInqEquip.asp
Pitco: http://www.pitco.com/OrderInqEquip.asp

From: Patricia Tolie [mailto:ptolie@dukemfg.com]
Sent: Monday, February 10, 2014 1:27 PM
To: PMR Orders
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook

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St. Louis, MO 63102
800-735-3853 ext. 247

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Sent: Monday, February 10, 2014 12:21 PM
To: Patricia Tolie
Subject: RE: Duke Holding Unit-Quote Needed - Off The Hook
Importance: High

Ok Trish, here is what they're asking for now:

1. Infrared unit
6 pans total
3 x 3
Larger pans
208/1
NOT a pass-thru
Qty 1

2. Heat sink unit
4 pans total
2 x 2
1/3 size pans
208/1

NOT a pass-thru
Qty 1

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[cid:image001.png@01CF2705.B165EB00]

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208/1

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Lawrenceville, GA 30043
770-441-3100

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MagiKitch'n: http://www.magikitchn.com/OrderInqEquip.asp
Pitco: http://www.pitco.com/OrderInqEquip.asp

From: Mary Roberts
Sent: Friday, February 07, 2014 4:10 PM
To: PMR Orders
Subject: FW: Duke Holding Unit

I need a quote for an emerging small chain.
Dealer is Tony Diez – Specialty Equipment
Email is tonydiez@cableone.net<mailto:tonydiez@cableone.net>

Job Name: Off the Hook

Attached is the Duke spec sheet for reference.

1. Pass thru infrared holding
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208/1

2. Pass thru infrared holding
8 bays – smaller 1/3 size pan
208/1

1 each.
Thanks!

From: Derinda Butler
Sent: Friday, February 07, 2014 2:43 PM
To: Mary Roberts
Subject: FW: Duke Holding Unit

He may be calling you.

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Lawrenceville GA 30043
(770) 817-7601 - Direct
(770) 449-6834 - Fax
www.pmreps.com<http://www.pmreps.com/>

[Description: Metallic-DarkFinal-40PctSize]

From: Derinda Butler
Sent: Friday, February 07, 2014 10:53 AM
To: tonydiez@cableone.net<mailto:tonydiez@cableone.net>
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www.pmreps.com<http://www.pmreps.com/>

[Description: Metallic-DarkFinal-40PctSize]

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<image002.png>

<Duke IRHS Spec Sheet.pdf>

<Duke IRHS Marketing Flyer.pdf>

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

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- IR Turbo Boost for instant shot of IR energy

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- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

SHORT FORM SPECIFICATIONS:

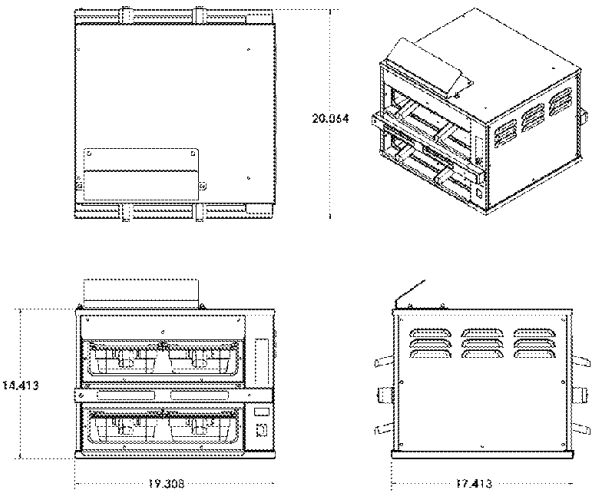
Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

DRAFT

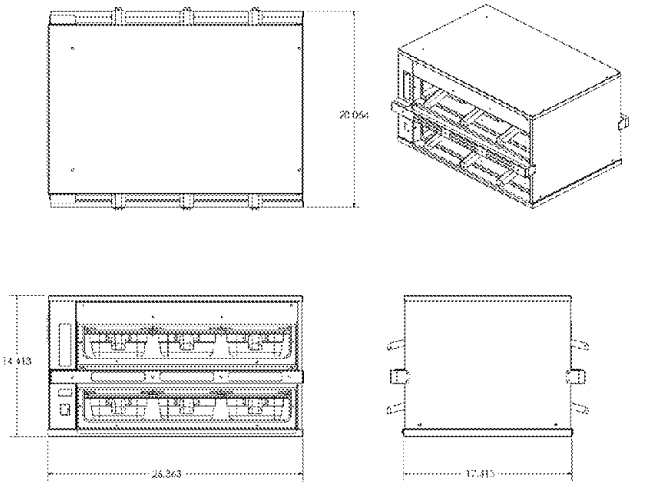
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
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IRHS-24			9.5	6-15P	8.3	6-15P
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EPEDITE COUNTER

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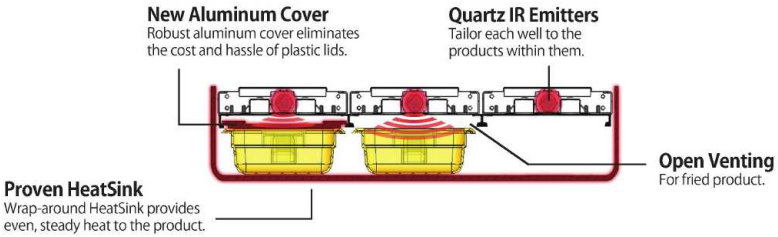
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Specification subject to change

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Turbo Boost your product temperatures and your profits.



Technology – for consistently HOT product.
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- Eliminate faceplate cracks with new stainless faceplate

Profit
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- Significantly extended hold times across the menu, including fried foods
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- Roll out future menu items and LTO's seamlessly without requiring new or specialized holding equipment

Kitchen Integration
- Web programming to quickly and easily customize configurations
- Connect to your kitchen management system
- Reduced footprint allows IRHS to fit into smaller spaces
- Plug-and-play electric configurations means the IRHS can replace your old PHU without new wiring
- Enhance your overall restaurant performance, improve GUESTTRAC Score and Speed of Service times





E-MAIL 8

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 3/4/2014 4:09:21 PM
To: Shilo Morin [Shilo.Morin@jackinthebox.com]
Subject: RE: Smaller Footprint Duke IRHS
Attachments: Duke IRHS Spec Sheet.pdf

Shilo –

The smallest we currently have is a 2x2. I have attached the spec sheet for your reference.

Since the units are of a modular design, we could make a smaller unit. The cost/pan would go up compared to a larger unit.

John

From: Shilo Morin [mailto:Shilo.Morin@jackinthebox.com]
Sent: Tuesday, March 04, 2014 10:04 AM
To: John Ulrich
Subject: Smaller Footprint Duke IRHS

Good Morning John,

Is the Duke IRHS offered in a smaller footprint? 1 x _?

Shilo Morin
Project Manager
Jack in the Box Inc.
858.571.2168
Operations Support

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

CLASSIFIED UL EPH

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

SHORT FORM SPECIFICATIONS:

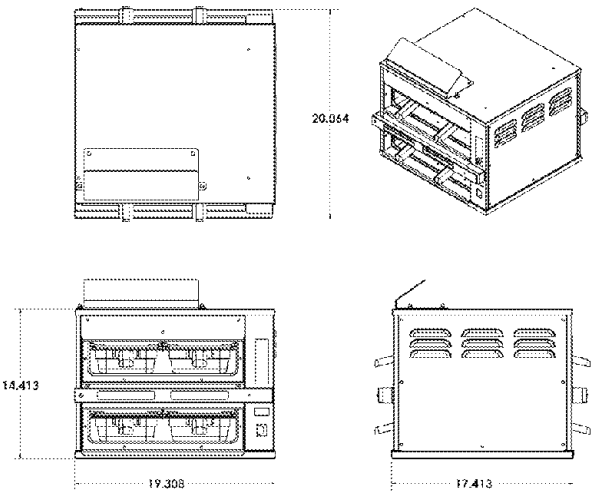
Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

DRAFT

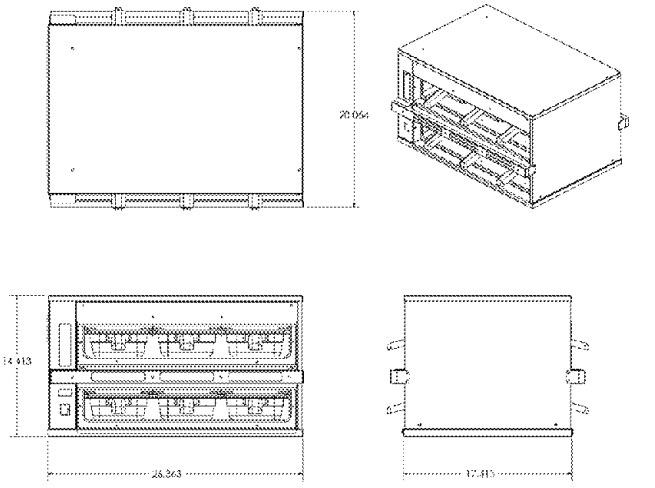
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
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IRHS-22



IRHS-23

DIMENSIONS: FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
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St. Louis, MO 63102

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www.dukemfg.com

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Specification subject to change

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09/13 DRAFT
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E-MAIL 9

From: John Ulrich [julrich@dukemfg.com]
Sent: 3/14/2014 11:16:13 AM
To: Jonathan.Biggs@dunkinbrands.com
CC: Kathy Veder [kveder@dukemfg.com]; David Viola [David@violagroup.com]; rosina@violagroup.com; Alyssa DeGreeff [adegreeff@dukemfg.com]; Greg Hake [ghake@dukemfg.com]
Subject: Duke Infrared HeatSink Holding Unit Information
Attachments: Duke IRHS Marketing Flyer.pdf; Duke IRHS Spec Sheet.pdf

Jonathan,

Thank you again for participating in yesterday's meeting to discuss the Duke Sandwich Station solutions. Yesterday, you seemed interested in the Infrared HeatSink Holding Unit (IRHS) so I wanted to provide you some more detail on it.

As we discussed, extended hold times are important to increase throughput and improve speed of service. In peak times, the cook can cook more product, less often while freeing them up for other tasks that will directly impact throughput. While during non-peak times, an extended hold provides a larger margin of error/longer hold time where you can hold higher volume products (peppered egg, sausage) when you could not otherwise.

The salient features are that it extends hold times and preserves the "just cooked" product quality during that extended hold time by adjusting the holding environment as the product naturally changes over time. By adapting the top IR emitters to the food product's changing stage, we can put the food in the best hold environment for the entire hold time.

Also, the unit is future proof where it can easily accommodate new menu expansion – each pan can have its own dynamic environment that can be customized to any food item.

The unit is flexible to use either timer bars or the Visor touchscreen so the user interface is intuitive.

We are working with Dunkin Culinary now to validate the settings, especially for hashbrowns and crispy chicken, and will notify you when we meet with them the next time.

Thanks again, Jonathan, we are excited about advancing this project with you!

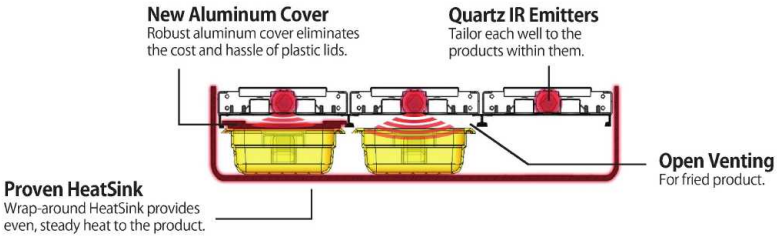
All the best,

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM

WWW.DUKEMFG.COM

InfraRed HeatSink™ (IRHS)

Turbo Boost your product temperatures and your profits.



Technology – for consistently HOT product.
- Dual holding technologies, InfraRed and HeatSink, built to last with a heavy, durable construction
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- Quickly and easily load new menu sets via USB
- Eliminate faceplate cracks with new stainless faceplate

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- Enhance your overall restaurant performance, improve GUESTTRAC Score and Speed of Service times

Eliminate Temperature Differential



OLD: HeatSink™ Only **NEW:** HeatSink™ and InfraRed



Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

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St. Louis, MO 63102

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www.dukemfg.com

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____

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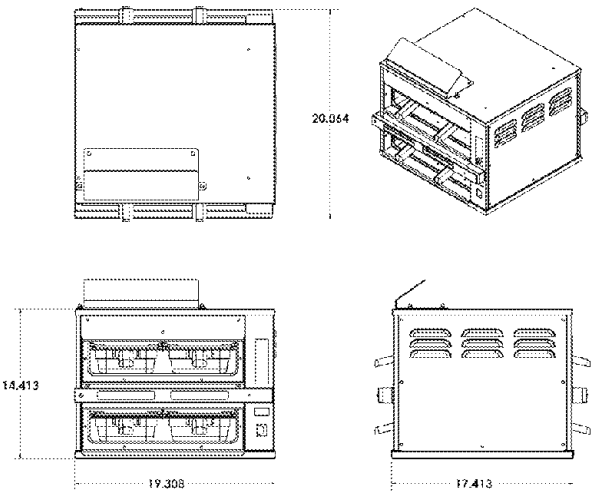
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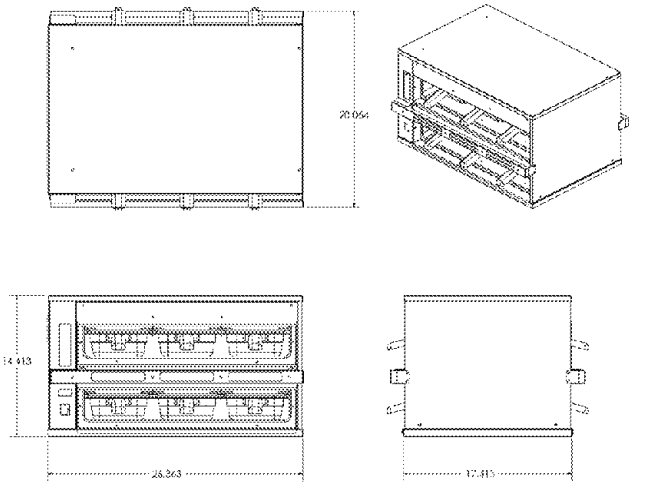
DRAFT

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IRHS-22



IRHS-23

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E-MAIL 10

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 5/13/2014 10:44:08 AM
To: Rosina Boyd [Rosina@violagroup.com]
Subject: RE: New Burger King/ Duke fry holding units.
Attachments: Duke IRHS Spec Sheet.pdf; Duke IRHS Marketing Flyer.pdf

Rosina –

Duke has recently developed two pieces of equipment – the fry holding unit and the IRHS. I don't exactly know which model that they are looking for based on the information I have so I propose that we have a conference call to better understand Friendly's requirements. Or, if Tim and Stephen will be at NRA, we can review there.

I have attached some information on a "fried food" holding unit, which is also known as the IRHS – Infrared Heat Sink Unit. The IRHS uses a combination of heating technologies – IR and Conductive Platen to provide the ideal environment for fried foods such as mozzarella sticks, fried chicken patties, chicken tenders and even moist foods (burgers, hot dogs), too. The primary advantage is the IR that extends the hold time while better maintaining the food quality during that time.

If they want a fry holding unit, that unit won't be available until September.

Thank you.

See the New Duke Solutions at the NRA Show in Chicago, May 17 – 20. Booth 7830.

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM



WWW.DUKEMFG.COM

From: Rosina Boyd [mailto:Rosina@violagroup.com]
Sent: Friday, May 09, 2014 2:16 PM
To: John Ulrich
Subject: Fwd: New Burger King/ Duke fry holding units.

John,

I don't know anything about this unit. Can you answer below question.

Thank you.
Rosina Boyd
Viola Group
Sent from my iPhone

Begin forwarded message:

From: "Tim Schey" <tschey@trimarkusa.com>
Date: May 9, 2014 at 11:26:43 AM EDT
To: "'Rosina Boyd'" <Rosina@violagroup.com>
Subject: FW: New Burger King/ Duke fry holding units.

Rosina, please see below and advise.

Thanks,

Tim Schey, Director of Contract Sales/National Accounts
TriMark United East | 505 Collins Street, S. Attleboro, MA 02703
P 508-399-2468 | **C** 508-725-1425 | **F** 508-761-3602|**E** Tschey@trimarkusa.com| trimarkusa.com

TriMark
Foodservice Equipment, Supplies and Design
UNITED EAST

From: Kloss, Stephen [mailto:Stephen.Kloss@Friendlys.com]
Sent: Friday, May 09, 2014 10:13 AM
To: 'Tim Schey'; Panella, David
Cc: O'Donovan, Michael
Subject: RE: New Burger King/ Duke fry holding units.

Tim,
Does that apply to the whole station, as I believe we are interested in the fried food holding unit only as a standalone unit?

Thank you.

Stephen Kloss
Product Development Chef
Friendly's Ice Cream LLC
1855 Boston Road
Wilbraham, MA. 01095
Office/ Voicemail 413-731-4283
Fax 413-731-4458
stephen.kloss@friendlys.com

From: Tim Schey [mailto:tschey@trimarkusa.com]
Sent: Friday, May 09, 2014 7:21 AM
To: Panella, David; Kloss, Stephen

Cc: O'Donovan, Michael
Subject: RE: New Burger King/ Duke fry holding units.

Dave, this unit is a Burger King proprietary unit. Because of this, it would not be available for use by any other concepts until late September.

Thanks,

Tim Schey, Director of Contract Sales/National Accounts
TriMark United East | 505 Collins Street, S. Attleboro, MA 02703
P 508-399-2468 | **C** 508-725-1425 | **F** 508-761-3602|**E** Tschey@trimarkusa.com| trimarkusa.com

TriMark
Foodservice Equipment, Supplies and Design
UNITED EAST

From: Panella, David [mailto:David.Panella@Friendlys.com]
Sent: Wednesday, May 07, 2014 8:10 PM
To: Kloss, Stephen; Tim Schey
Cc: O'Donovan, Michael
Subject: Re: New Burger King/ Duke fry holding units.

Tim, as we discussed could you please contact our Duke rep and see if we can get a test unit in our R&D lab?

Thanks,
Dave

Sent from my iPad

On May 7, 2014, at 2:03 PM, "Kloss, Stephen" <Stephen.Kloss@Friendlys.com> wrote:

Hi Dave,

Michael asked me to see about getting one of the new Burger King fry holding unit made by Duke for the R&D kitchen to test.

Let me know if you have any questions.

Fry Station | Duke Burger King

Thank you very much.

Stephen Kloss
Product Development Chef
Friendly's Ice Cream LLC

1855 Boston Road
Wilbraham, MA. 01095
Office/ Voicemail 413-731-4283
Fax 413-731-4458
stephen.kloss@friendlys.com

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Specifications

F.O.B Sedalia, Missouri 65302



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
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- ☐ Kitchen Minder slave unit
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Approval Stamp(s):

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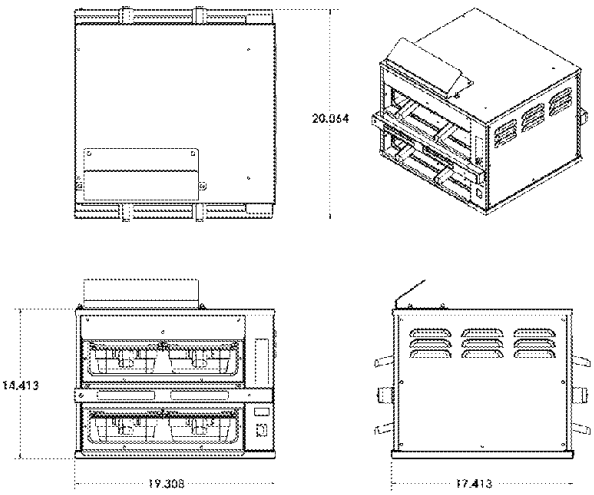
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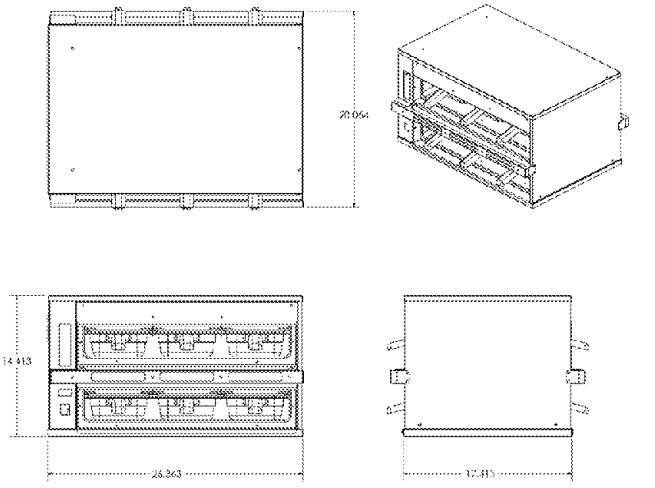
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IRHS-22



IRHS-23

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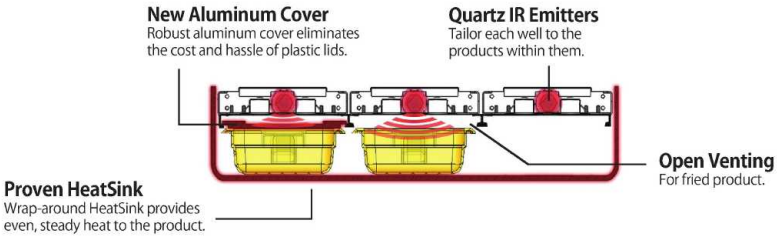
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InfraRed HeatSink™ (IRHS)

Turbo Boost your product temperatures and your profits.



Technology – for consistently HOT product.
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E-MAIL 11

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 5/28/2014 11:23:33 AM
To: rfuller@backyardburgers.com
CC: Jim Van Vleet (jim@pmreps.com) [jim@pmreps.com]
Subject: DUKE Information on IRHS
Attachments: Duke IRHS Marketing Flyer.pdf; Duke IRHS Spec Sheet.pdf

Robert –

Thanks again for stopping by the Duke booth at NRA. While we were there, we discussed the new Duke holding unit that combines technology – Infrared and HeatSink technologies that help extend the hold times and maintain the product quality of all products. In particular, this unit does the best job on fried foods because of how the IR pulses to gently heat the product.

Jim Van Vleet of PMR will be following up with you to further discuss the IRHS.

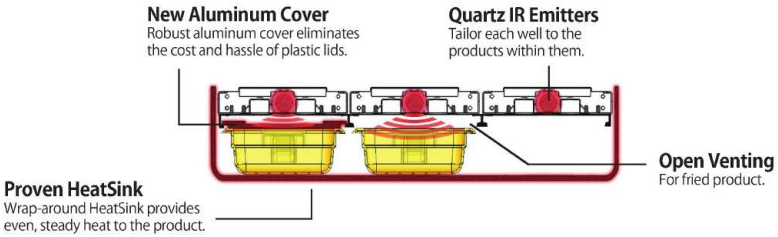
All the best,

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM

WWW.DUKEMFG.COM

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- Dual holding technologies, InfraRed and HeatSink, built to last with a heavy, durable construction
- Prevent grease migration and performance degradation with a solid-state, fanless design, extended HeatSink and fully sealed cavity with no openings
- Heavy, robust individual aluminum covers with better heat transfer and greater seal assurance; critical to maintain food quality with extended hold times
- Utilize "Turbo Boost" for an instant shot of heat to boost food temperature for hot, consistent food
- Robust timer bars with a proven track record
- Improve operations with more product information at each well
- Quickly and easily load new menu sets via USB
- Eliminate faceplate cracks with new stainless faceplate

Profit
- Drastic improvement in food temperatures- always hot, always consistent
- Unlimited flexibility for current and future menu.
- Hold any food item in any well, knowing that it is in an optimized holding environment tailored to that product
- Significantly extended hold times across the menu, including fried foods
- Energy efficient technology that utilizes idle mode and does not force hot air into kitchen
- Roll out future menu items and LTO's seamlessly without requiring new or specialized holding equipment

Kitchen Integration
- Web programming to quickly and easily customize configurations
- Connect to your kitchen management system
- Reduced footprint allows IRHS to fit into smaller spaces
- Plug-and-play electric configurations means the IRHS can replace your old PHU without new wiring
- Enhance your overall restaurant performance, improve GUESTTRAC Score and Speed of Service times

Eliminate Temperature Differential



OLD: HeatSink™ Only **NEW:** HeatSink™ and InfraRed



Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

CLASSIFIED UL EPH

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

SHORT FORM SPECIFICATIONS:

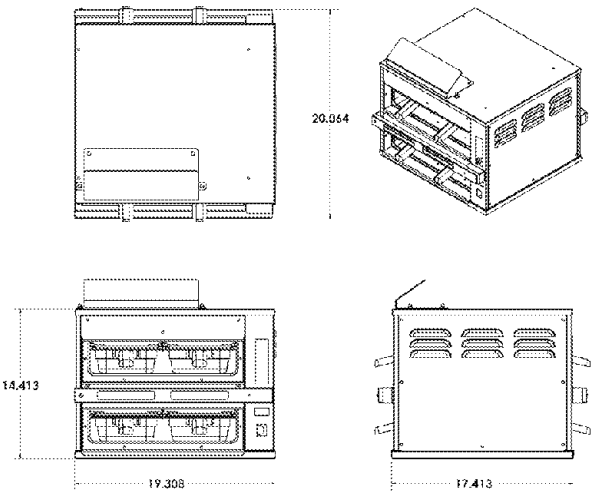
Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

DRAFT

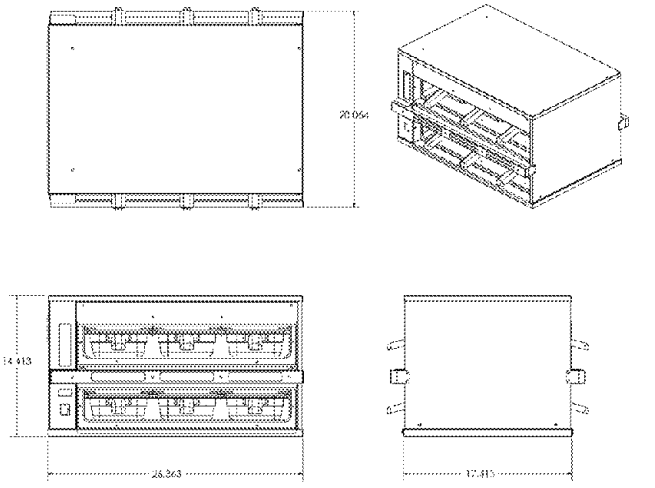
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS: FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

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E-MAIL 12

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 6/5/2014 7:39:57 PM
To: Bettiga, John [jbettiga@wbhq.com]
Subject: Budget Pricing for IRHS-23-208
Attachments: Duke IRHS Spec Sheet.pdf

John,

Duke is still finalizing pricing on this model, but I do know enough to provide a budget price for this unit.

A six slot unit will be about $3800 with timers on both sides.

I am working on lead time now for a test unit. I have all your products and will set up the site with the new unit.

Thank you.

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM

WWW.DUKEMFG.COM

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Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
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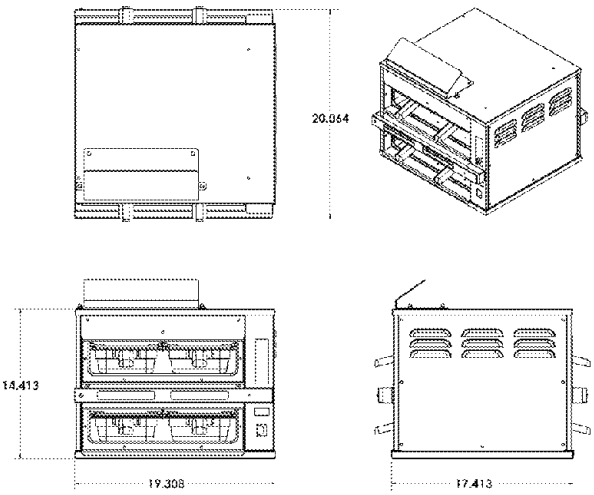
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DRAFT

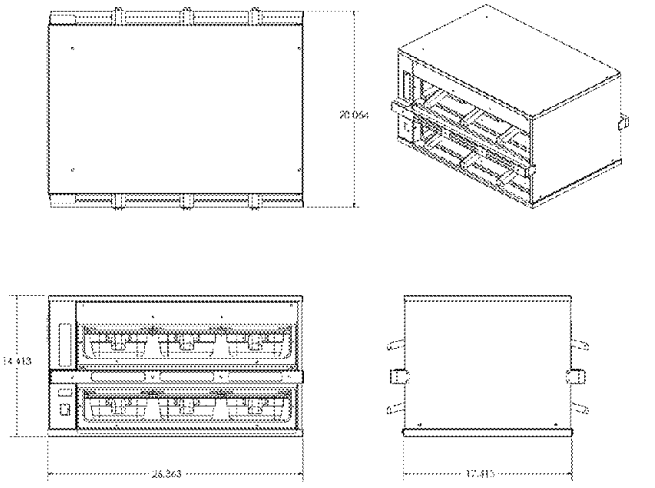
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

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E-MAIL 13

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 6/10/2014 9:38:11 PM
To: Zinnel, Scott (Scott.Zinnel@idq.com) [Scott.Zinnel@idq.com]; Bader, Craig (Craig.Bader@idq.com) [Craig.Bader@idq.com]
CC: Bob Booker [bbooker@dukemfg.com]; Patricia Tolie [ptolie@dukemfg.com]; Greg Hake [ghake@dukemfg.com]; 'miked@dalyderoma.com' [miked@dalyderoma.com]
Subject: Pricing for Duke Infrared Heat Sink Holding Units
Attachments: Duke IRHS Spec Sheet.pdf

Scott,

Here is the current pricing for the IRHS – HeatSink with IR – holding units. All units have timers on both sides. We will have a formal quote sent for your records.

IRHS-22-208 (four pan) = $2967
IRHS-23-208 (six pan) = $3736
IRHS-24-208 (eight pan) = $4614

Thank you.

JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM



WWW.DUKEMFG.COM

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
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SHORT FORM SPECIFICATIONS:

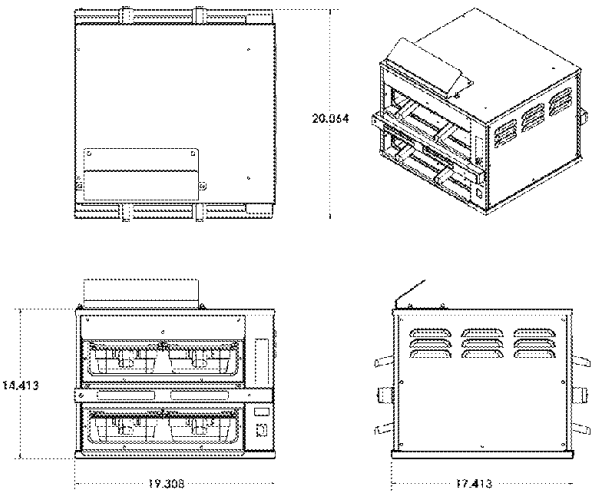
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DRAFT

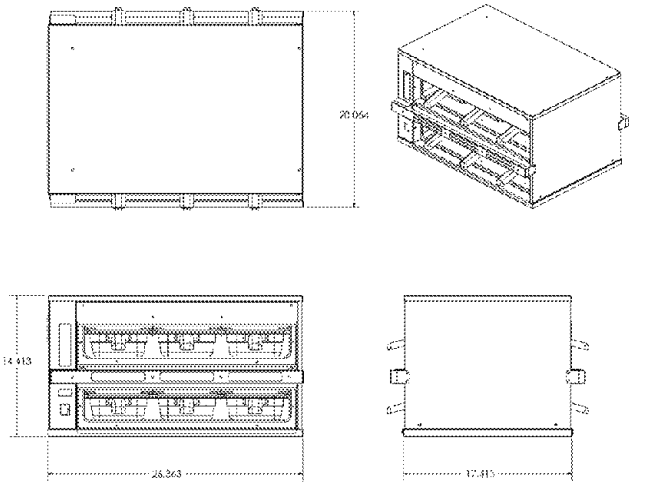
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS: FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
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E-MAIL 14

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 6/20/2014 3:55:00 PM
To: rfuller@backyardburgers.com
CC: Jim Van Vleet (jim@pmreps.com) [jim@pmreps.com]
Subject: FW: DUKE Information on IRHS
Attachments: Duke IRHS Marketing Flyer.pdf; Duke IRHS Spec Sheet.pdf

Robert,

I hope all is well since we spoke at the Restaurant Show last month. I am following up if you require any additional information on the new Duke product holding units.

Thank you and have a great weekend.

John

From: John Ulrich
Sent: Tuesday, May 27, 2014 10:10 PM
To: 'rfuller@backyardburgers.com'
Cc: Jim Van Vleet (jim@pmreps.com)
Subject: DUKE Information on IRHS

Robert –

Thanks again for stopping by the Duke booth at NRA. While we were there, we discussed the new Duke holding unit that combines technology – Infrared and HeatSink technologies that help extend the hold times and maintain the product quality of all products. In particular, this unit does the best job on fried foods because of how the IR pulses to gently heat the product.

Jim Van Vleet of PMR will be following up with you to further discuss the IRHS.

All the best,

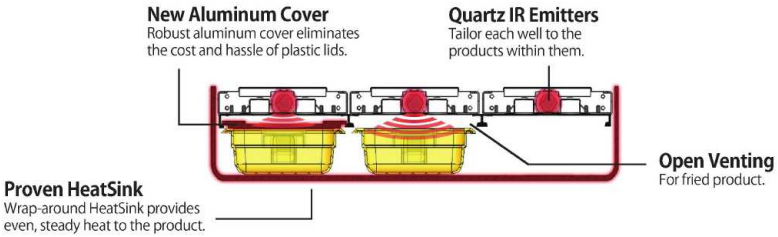
JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
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314-614-6344
JULRICH@DUKEMFG.COM



WWW.DUKEMFG.COM

InfraRed HeatSink™ (IRHS)

Turbo Boost your product temperatures and your profits.



Technology – for consistently HOT product.
- Dual holding technologies, InfraRed and HeatSink, built to last with a heavy, durable construction
- Prevent grease migration and performance degradation with a solid-state, fanless design, extended HeatSink and fully sealed cavity with no openings
- Heavy, robust individual aluminum covers with better heat transfer and greater seal assurance; critical to maintain food quality with extended hold times
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- Unlimited flexibility for current and future menu.
- Hold any food item in any well, knowing that it is in an optimized holding environment tailored to that product
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- Web programming to quickly and easily customize configurations
- Connect to your kitchen management system
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- Plug-and-play electric configurations means the IRHS can replace your old PHU without new wiring
- Enhance your overall restaurant performance, improve GUESTTRAC Score and Speed of Service times

Eliminate Temperature Differential



OLD: HeatSink™ Only **NEW:** HeatSink™ and InfraRed



Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
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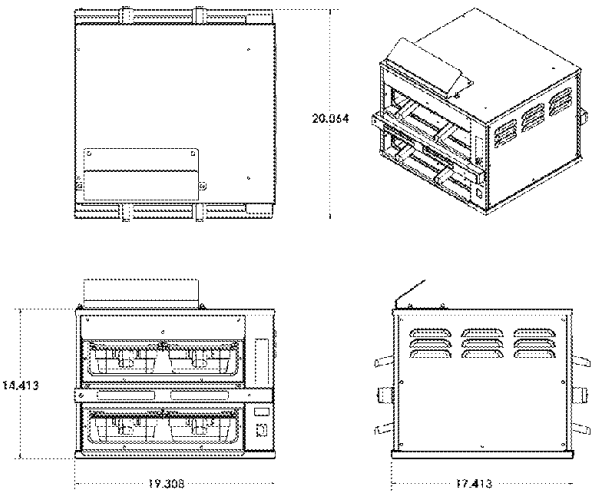
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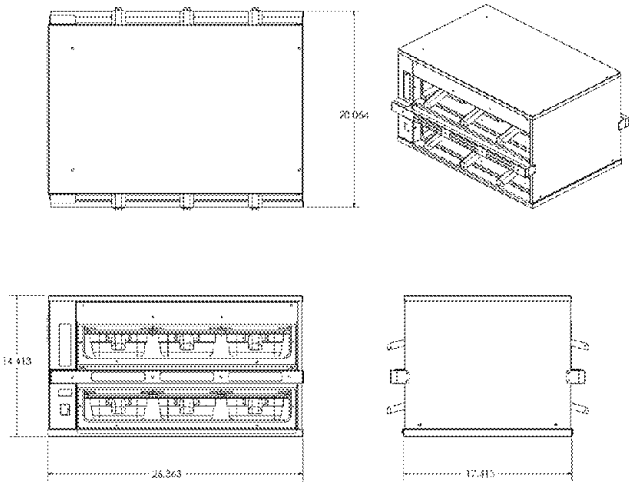
DRAFT

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
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IRHS-22



IRHS-23

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FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
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E-MAIL 15

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 6/24/2014 11:31:09 AM
To: Bettiga, John [jbettiga@wbhq.com]
Subject: RE: Budget Pricing for IRHS-23-208
Attachments: Duke IRHS Spec Sheet.pdf

John,

The price for a IRHS-23-208 with timers on both sides is $3736.

I have a unit being shipped today to your attention. It is a pre-used unit but works well. If you do decide to purchase one, we will replace this unit with a new one.

Thank you.

John

From: Bettiga, John [mailto:jbettiga@wbhq.com]
Sent: Monday, June 23, 2014 10:23 AM
To: John Ulrich
Subject: RE: Budget Pricing for IRHS-23-208

John,

Please send a quote for one of the bins so we can issue a PO.

Thanks

John

From: John Ulrich [mailto:julrich@dukemfg.com]
Sent: Thursday, June 05, 2014 2:40 PM
To: Bettiga, John
Subject: Budget Pricing for IRHS-23-208

John,

Duke is still finalizing pricing on this model, but I do know enough to provide a budget price for this unit.

A six slot unit will be about $3800 with timers on both sides.

I am working on lead time now for a test unit. I have all your products and will set up the site with the new unit.

Thank you.

JOHN R. ULRICH
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Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

CLASSIFIED UL EPH

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

SHORT FORM SPECIFICATIONS:

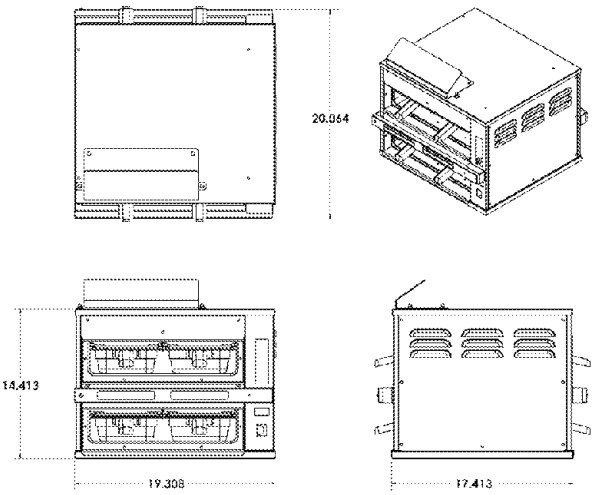
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DRAFT

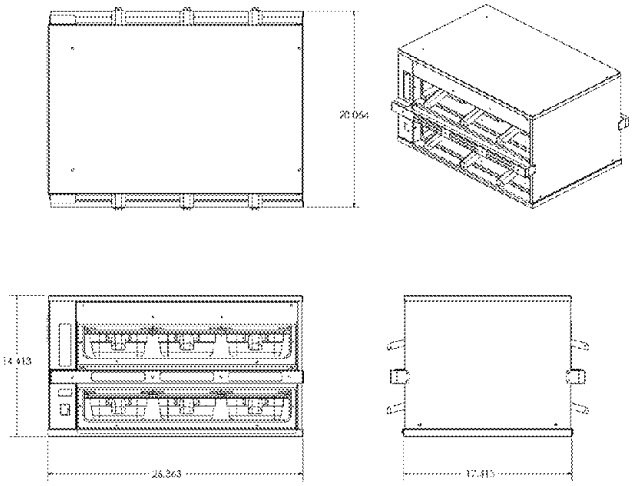
Duke®

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IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
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E-MAIL 16

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 7/25/2014 3:01:54 PM
To: Patricia Tolie [ptolie@dukemfg.com]
CC: lhanley@epikitchen.com; kbyler@epikitchen.com; Bill Cassidy [BCassidy@epikitchen.com]
Subject: FW: 51374CV Duke Mfg SAProdCntr.xls
Attachments: 51374CV Duke Mfg SAProdCntr.pdf; Duke IRHS Spec Sheet.pdf; Duke IRHS Marketing Flyer.pdf

Trish,

Here is an order for the IRHS-23 for Whataburger. This unit has controls on both sides.

I am told that there will be another PO for IRHS with single sided controls today.

Commission = 5% to EPI.

Thank you.

John

From: Bettiga, John [mailto:jbettiga@wbhq.com]
Sent: Friday, July 25, 2014 8:46 AM
To: John Ulrich
Subject: FW: 51374CV Duke Mfg SAProdCntr.xls

John,

This po is for units with controls on both sides.

Thanks

Albert Einstein: "The only constant is change."

John Bettiga
Manager
Performance Tools and Techniques
Restaurant Production
Whataburger Restaurants L.P.
300 Concord Plaza Dr
San Antonio, TX 78216
O: 210-476-6577
F: 210-395-6577
C: 210-378-6104

From: Morin, Roxanne
Sent: Thursday, July 24, 2014 10:53 AM
To: John Ulrich (julrich@dukemfg.com)
Cc: Bettiga, John; White, Dennis; Saidler, Stefani; Mouttet, Brandice
Subject: 51374CV Duke Mfg SAProdCntr.xls

See the attached purchase order. Please confirm receipt and ship date.

Thanks,

Roxanne Morin

Whataburger Restaurants LLC
Enterprise Business Services
(Ph) 210.476.6305
(Fax) 210.395.6305

Whataburger Restaurants LLC

Enterprise Business Services
P.O. Box 791990
San Antonio, Texas 78279-1990
Phone: (210) 476-6305
Fax: (210) 395-6914

51374CV

TO: Duke Mfg

ADDRESS:

SHIP TO: Whataburger
Attn: John Bettiga
ADDRESS: 2321 NW Military Hwy.
San Antonio, Texas 78232

DATE:	UNIT #	CHARGE TO:	DATE REQUIRED:
July 24, 2014	SA Prod Center	3000054	August 4, 2014

QUANTITY ORDERED	DESCRIPTION	PRICE	EXTENDED
2	IRHS-23-208; holding bins	3,736.00	7,472.00
	Will need lift gate and 24 hr notice prior to delivery		
	Delivery/Service must be scheduled at least 24-48 hours in advance.		
	All unscheduled deliveries will be refused.		
	Please schedule delivery/service with Dennis White @ 214-517-8665		
	TOTAL		**7,472.00**

Plus Tax

Please submit invoice to:
Accounts Payable
Whataburger Restaurants LLC
300 Concord Plaza Dr.
San Antonio, Tx. 78216

BUYER: Roxanne Morin

BY ACKNOWLEDGING THIS ORDER, YOUR COMPANY AGREES TO THE FOLLOWING TERMS:

1. **Supplier must acknowledge & provide estimated date for this purchase order within one business day via e-mail to PurchaseOrderConfirm@wbhq.com or fax to (210) 395-6914. Please advise if there is a price discrepancy.**
2. **Supplier must provide a ship confirmation including actual freight, date completed, and/or tracking information (if applicable) prior to invoice submission to ShipConfirm@wbhq.com or fax to (210) 395-6914.**
3. **Please notify Whataburger Buyer ASAP if you are unable to ship items requested by date required.**

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302



IRHS - 23

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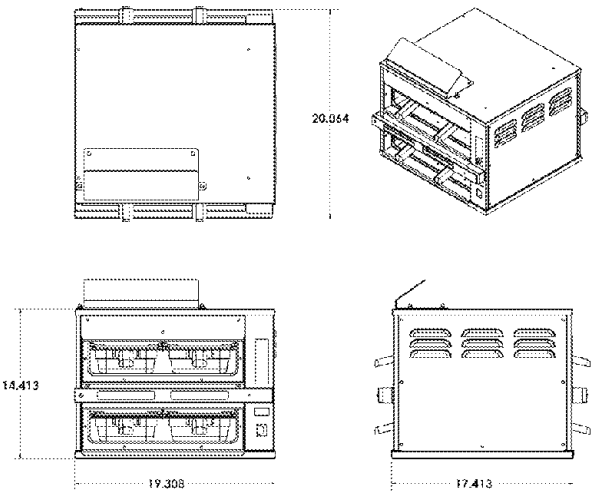
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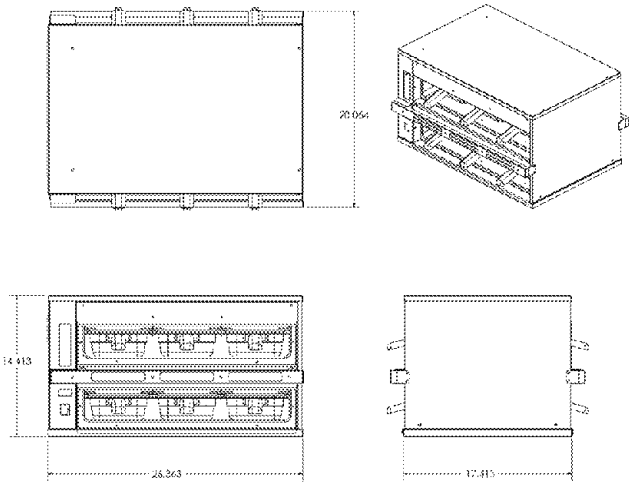
DRAFT

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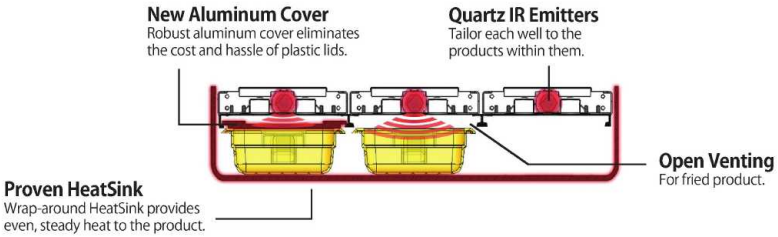
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Specification subject to change

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InfraRed HeatSink™ (IRHS)

Turbo Boost your product temperatures and your profits.



Technology – for consistently HOT product.
- Dual holding technologies, InfraRed and HeatSink, built to last with a heavy, durable construction
- Prevent grease migration and performance degradation with a solid-state, fanless design, extended HeatSink and fully sealed cavity with no openings
- Heavy, robust individual aluminum covers with better heat transfer and greater seal assurance; critical to maintain food quality with extended hold times
- Utilize "Turbo Boost" for an instant shot of heat to boost food temperature for hot, consistent food
- Robust timer bars with a proven track record
- Improve operations with more product information at each well
- Quickly and easily load new menu sets via USB
- Eliminate faceplate cracks with new stainless faceplate

Profit
- Drastic improvement in food temperatures- always hot, always consistent
- Unlimited flexibility for current and future menu.
- Hold any food item in any well, knowing that it is in an optimized holding environment tailored to that product
- Significantly extended hold times across the menu, including fried foods
- Energy efficient technology that utilizes idle mode and does not force hot air into kitchen
- Roll out future menu items and LTO's seamlessly without requiring new or specialized holding equipment

Kitchen Integration
- Web programming to quickly and easily customize configurations
- Connect to your kitchen management system
- Reduced footprint allows IRHS to fit into smaller spaces
- Plug-and-play electric configurations means the IRHS can replace your old PHU without new wiring
- Enhance your overall restaurant performance, improve GUESTTRAC Score and Speed of Service times





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Sent: 8/8/2014 8:46:13 PM
To: lhanley@epikitchen.com
Subject: IRHS Information
Attachments: Duke IRHS Marketing Flyer.pdf; Duke IRHS Spec Sheet.pdf

Les,

Here is the information that you requested on the Duke combination holding technology – Pulsating Infrared and HeatSink.

Let me know if you need anything else.

Have a great weekend.

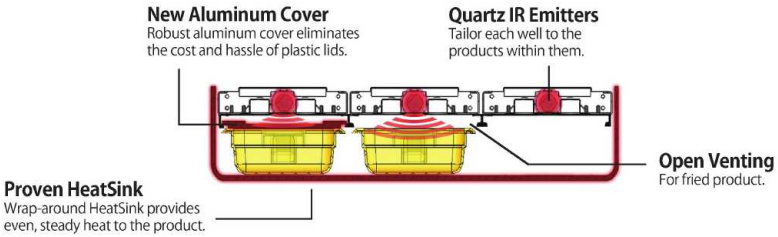
JOHN R. ULRICH
DIRECTOR, NATIONAL ACCOUNTS
DUKE MANUFACTURING
314-614-6344
JULRICH@DUKEMFG.COM



WWW.DUKEMFG.COM

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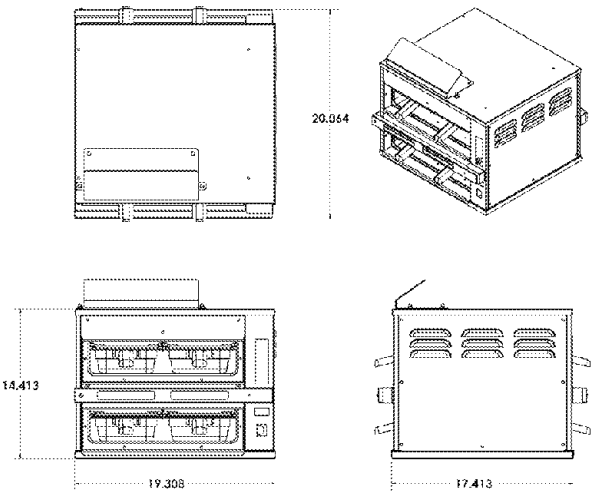
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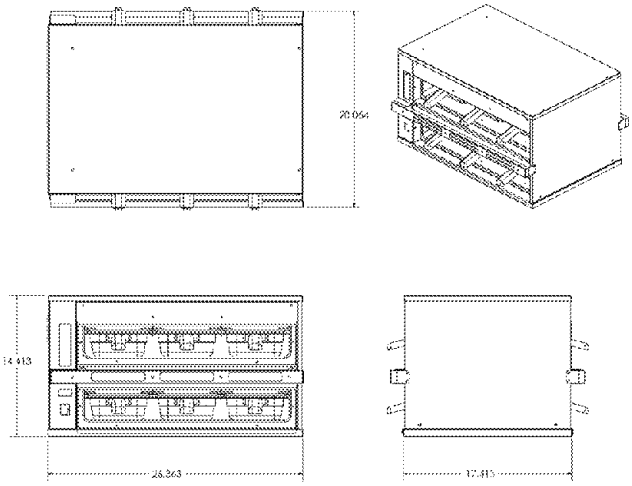
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Sent: 9/3/2014 1:26:10 PM
To: kbyler@epikitchen.com; hhulse@epikitchen.com
CC: Joe Rennon [jrennon@dukemfg.com]
Subject: Duke Equipment for EPI Show
Attachments: Duke IRHS Spec Sheet.pdf; Duke CounterTop Fry Holding Dimensions.pdf

Helen and Kristi –

I have attached the spec sheets for the new equipment for the EPI Show.

We plan to send:

IRHS-22-120 = 120V, 15A Plug
Countertop Fry Holding Unit = 120V, 20Amp (this is a maybe unit because it is still in development)

John

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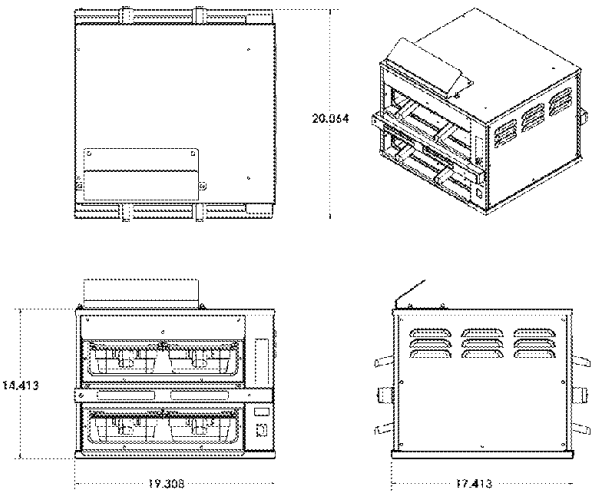
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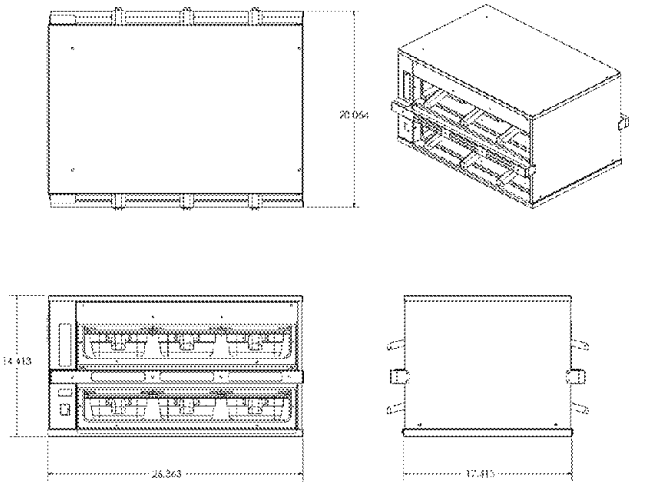
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2305 N. Broadway
St. Louis, MO 63102

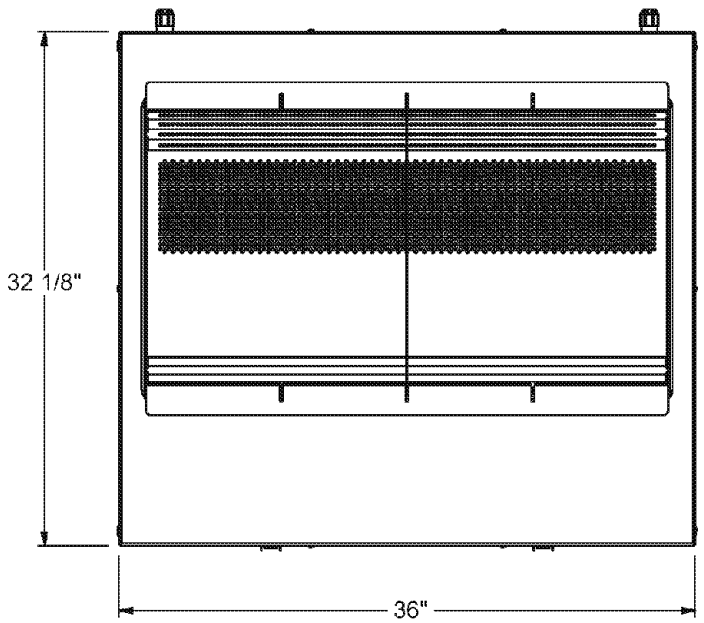
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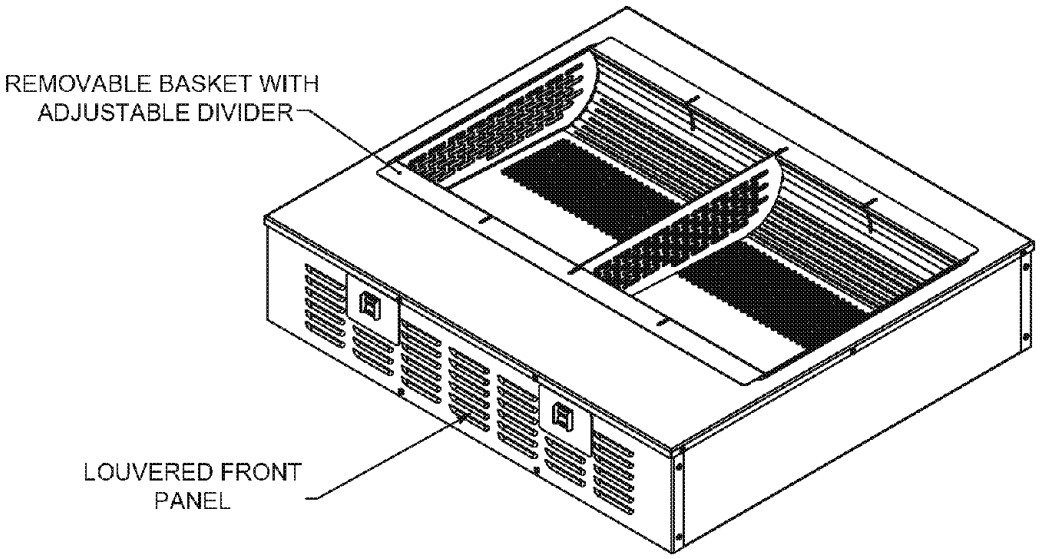
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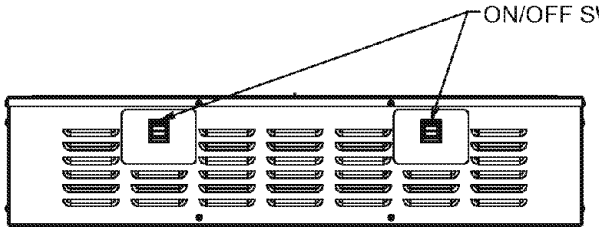
Specification subject to change

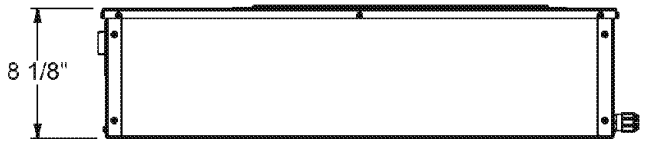
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REV	ECO#	REV BY	DATE	DESCRIPTION
A		AJS	06/12/2014	New Release
B		AJS	07/16/2014	SEE REV-B NOTES (PAGE 2)
C		KJW	07/25/2014	Replaced 1033-632 w/ 1033-634









VOLTS	AMPS	AMPACITY	WATTS	CURCUITS
120	16	20	3700	2

UNLESS OTHERWISE NOTED:
ALL DIMENSIONS ARE OUTSIDE
TOLERANCES:
LINEAR +\- .032"
ANGLES +\- 1°
HOLES Ø +\- .002"

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DUKE MANUFACTURING CO.

2305 N. BROADWAY ST. LOUIS MO. 63102
"YOUR SOLUTIONS PARTNER"

DRAWING BY	DATE
AJS	6/12/2014

ASSEMBLY LINE:

CUSTOMER:

SHEET 1 OF 5 | SCALE 1:12

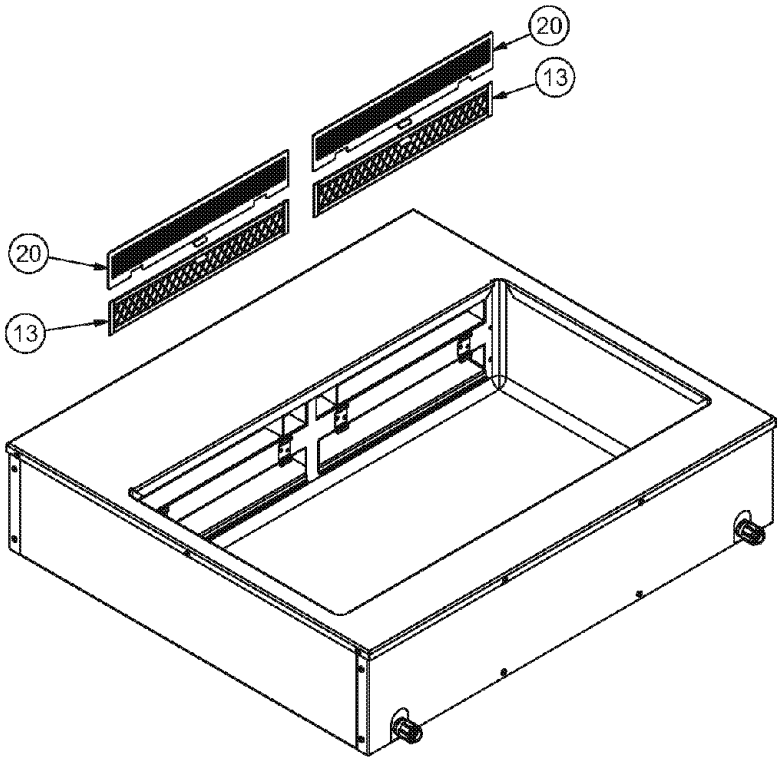
ASM, DUAL LANE, 120V
FRY STATION, DROP IN

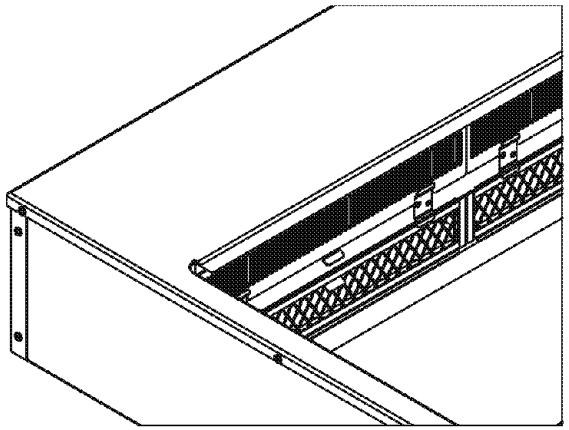
PART FILE: di asm drop in dual

DWG / PART NO.:

1033-595

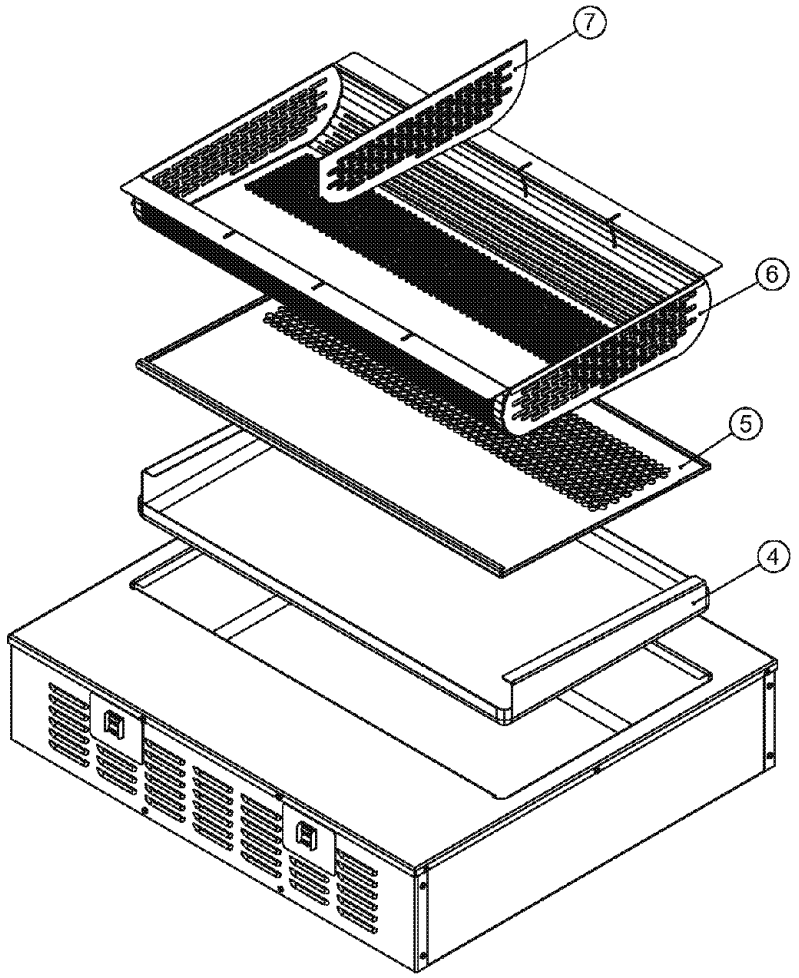
REV	ECO#	REV BY	DATE	DESCRIPTION
A		AJS	06/12/2014	New Release
B		AJS	07/16/2014	SEE REV-B NOTES (PAGE 2)
C		KJW	07/25/2014	Replaced 1033-632 w/ 1033-634





SCALE 1:8

Ⓖ INSTALL RETURN FILTER AND DISCHARGE PLATES



Ⓗ INSTALL COLLECTION PAN, RETURN PLATE, BASKET, AND DIVIDER

UNLESS OTHERWISE NOTED:
ALL DIMENSIONS ARE OUTSIDE
TOLERANCES:
LINEAR +\- .032"
ANGLES +\- 1°
HOLES Ø +\- .002"

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DRAWING BY	DATE
AJS	6/12/2014

ASSEMBLY LIN.:

CUSTOMER:

SHEET 6 OF 6 | SCALE 1:12

ASM, DUAL LANE, 120V
FRY STATION, DROP IN

PART FILE: di asm drop in dual

DWG / PART NO.:

1033-595

E-MAIL 19

From: John Ulrich [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JOHN ULRICH]
Sent: 9/18/2014 1:03:16 PM
To: Bill Boddie Jr. [billboddiejr@boddienoell.com]
CC: Matt Turner [matt@amaofthecarolinas.com]
Subject: RE: IRHS holding cabinet follow up
Attachments: Duke IRHS Spec Sheet.pdf

Bill,

No confusion here so we are all good.

We are close. We have a three high by four across. It is 208V, 14.3Amps (6-20 plug). It is 4 amps more than your current Prince Castle 208V (6-15 plug) two high by four wide holding unit. Would this work?

John

From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]
Sent: Thursday, September 18, 2014 7:28 AM
To: John Ulrich
Subject: FW: IRHS holding cabinet follow up

John,

Mike Boddie sent me the email below right after I responded back to you this morning on the go ahead. Do you guys have a cabinet that is 3 drawers across and 3 drawers tall with the correct wattage? If so, we would like to test that cabinet out instead of the initial cabinet mentioned.

Sorry for the confusion and please feel free to call me if you have any questions.

Thanks,

Bill Boddie Jr

Operations/Services Manager
Phone: 252-937-2800 ext. 1211
Email: Billboddiejr@boddienoell.com

From: Mike Boddie
Sent: Thursday, September 18, 2014 7:57 AM
To: Bill Boddie Jr.; Laura Joyner
Cc: Johnny Thompson; Tim Lane
Subject: RE: IRHS holding cabinet follow up

Bill,

Ask John Ulrich if Duke has a cabinet that is three drawers across and three drawers tall. This way if it works in the test kitchen we can test it in North Wesleyan where the Marshall cabinet is with the same drawer set up. This would also be the set up we have planned for new stores.

Thanks,

Mike

From: Bill Boddie Jr.
Sent: Wednesday, September 17, 2014 9:05 PM
To: Laura Joyner
Cc: Mike Boddie; Johnny Thompson; Tim Lane
Subject: Re: IRHS holding cabinet follow up

Yes, we will test in kitchen then try it out in a unit. It is the same cabinet with the correct wattage

Thanks,

Bill Boddie Jr
Boddie Noell Enterprises
Office: 252-937-2800 ext.1211
Cell: 252-883-9335
billboddiejr@boddienoell.com

Sent from my iPhone

On Sep 17, 2014, at 3:13 PM, "Laura Joyner" <laurajoyner@boddienoell.com> wrote:

What are your plans for testing? Initial review in the test kitchen and then testing in a unit? Is this the same unit as before (but with correct wattage)?

From: Bill Boddie Jr.
Sent: Wednesday, September 17, 2014 3:10 PM
To: Laura Joyner; Tim Lane
Cc: Mike Boddie; Johnny Thompson
Subject: Fwd: IRHS holding cabinet follow up

Laura and Tim,

Johnny Thompson and I met with John Ulrich from Duke back in June discussing to test out one of their holding cabinets (IRHS). We had many projects going on throughout the summer, so we postponed the test to September. Is it ok with you if I go ahead and respond back to John to ship the IRHS cabinet to BNE for testing?

Thanks,

Bill Boddie Jr
Boddie Noell Enterprises
Office: 252-937-2800 ext.1211
Cell: 252-883-9335
billboddiejr@boddienoell.com

Sent from my iPhone

Begin forwarded message:

From: John Ulrich <julrich@dukemfg.com>
Date: September 17, 2014 at 2:45:22 PM EDT
To: 'Bill Boddie Jr.' <billboddiejr@boddienoell.com>
Cc: 'Johnny Thompson' <johnnythompson@boddienoell.com>, Matt Turner <matt@amaofthecarolinas.com>
Subject: RE: IRHS holding cabinet follow up

Bill,

I hope that all is well and that you had a good summer. I am following up to see what your timeline is for the IRHS.

Thank you.

John

From: John Ulrich
Sent: Friday, June 27, 2014 7:00 AM
To: Bill Boddie Jr.
Cc: Johnny Thompson; Matt Turner
Subject: RE: IRHS holding cabinet follow up

Bill,

It was great talking with you guys yesterday and thank you for your time and interest in the new Duke products.

Your plan works for us so we will plan for a late August test.

Good luck with your bun baking and enjoy your summer.

All the best,

John

From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]
Sent: Wednesday, June 25, 2014 10:26 AM
To: John Ulrich
Cc: Johnny Thompson; Bill Boddie Jr.
Subject: IRHS holding cabinet follow up

John,

Thank you guys for stopping by BNE today and sharing with Johnny and I your new products. After discussion with Tim Lane and Mike Boddie on the IRHS holding cabinet test, Tim thinks it would be best to wait until the last week of August before you send us the cabinet. Laura Joyner will be busy and active with testing other equipment throughout July and August.

I will send you a reminder John the last week of August for shipment on the IRHS. We will test the cabinet at the home office first and then discuss a restaurant for testing.

Thanks again for stopping by and travel safely back to St. Louis my friend! Have fun in Charleston tomorrow!

Thanks,

Bill Boddie Jr

Operations/Services Manager

Phone: 252-937-2800 ext. 1211
Email: Billboddiejr@boddienoell.com

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Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

SHORT FORM SPECIFICATIONS:

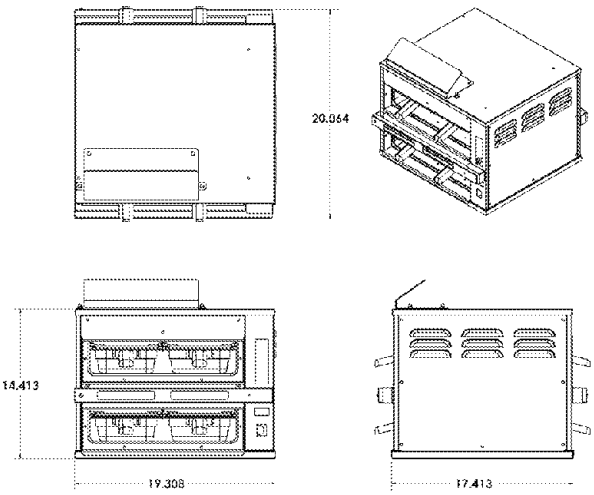
Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

DRAFT

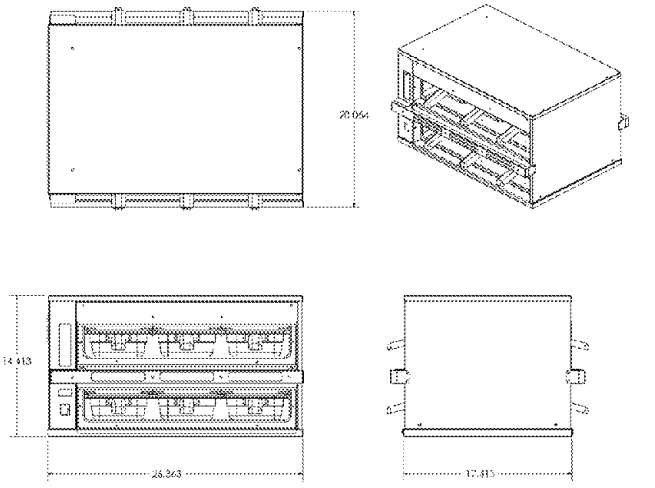
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

EPEDITE COUNTER

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Specification subject to change

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E-MAIL 20

From: John Ulrich [julrich@dukemfg.com]
Sent: 9/24/2014 7:52:04 PM
To: Zinnel, Scott (Scott.Zinnel@idq.com) [Scott.Zinnel@idq.com]; Miller, Brent [Brent.Miller@idq.com]
CC: 'miked@dalyderoma.com' [miked@dalyderoma.com]; Kathy Veder [kveder@dukemfg.com]; Greg Hake [ghake@dukemfg.com]; Bob Schafer [bschafer@dukemfg.com]
Subject: Field Test of Duke IRHS for Dairy Queen - Sandusky, MI
Attachments: Duke IRHS Spec Sheet.pdf

Scott and Brent,

Thank you again for your partnership over the last six years that I was with Duke. I can assure you that you will be in great hands with Kathy Veder, Duke's VP of Strategic Accounts, and the rest of the Duke support team. And, of course, Mike Daly.

As we discussed yesterday, Duke will support the IRHS field test in Sandusky, MI in the following manner:

- Duke will sell the IRHS-24 at the FWM3-24 price
- Orders will go through Wasserstrom
- Duke/Mike Daly to provide start-up training to franchisee
- If IDQ decides not to proceed with IRHS-24 in this location, then Duke will replace with FWM3-24 at no charge

As part of the test, Dairy Queen will provide Duke the following:

- Field testing criteria
  - Length of field test
  - Testing metrics
- Regular updates on test progress

Thank you.

John

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

AGENCY LISTING:

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St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____

MODEL:

Product Holding Unit - Infra Red Heat Sink

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IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

SHORT FORM SPECIFICATIONS:

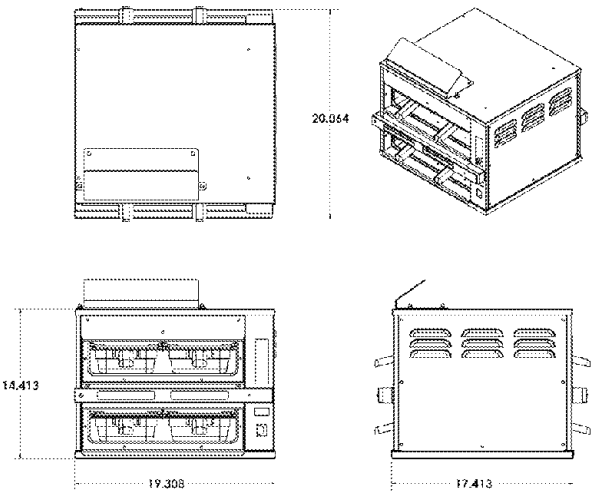
Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

DRAFT

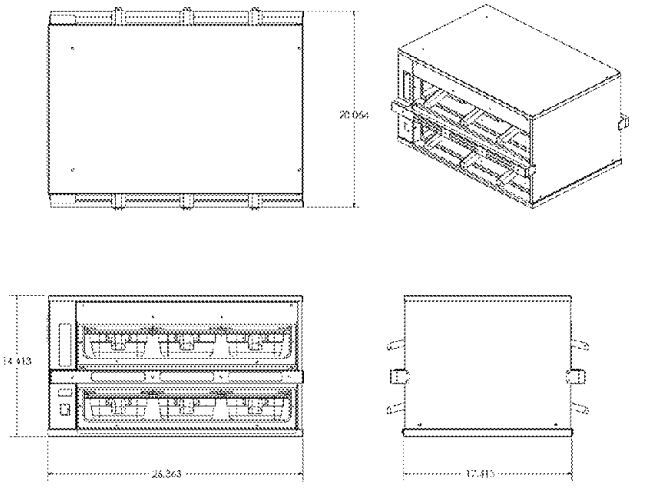
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

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E-MAIL 21

From: John Ulrich [julrich@dukemfg.com]
Sent: 9/26/2014 2:51:23 PM
To: Zinnel, Scott (Scott.Zinnel@idq.com) [Scott.Zinnel@idq.com]
CC: Kathy Veder [kveder@dukemfg.com]; 'miked@dalyderoma.com' [miked@dalyderoma.com]; Greg Hake [ghake@dukemfg.com]
Subject: Quote for IRHS
Attachments: Quote 88679 IDQ IRHS24.pdf; Duke IRHS Spec Sheet.pdf

Scott,

Please see the attached quote for the IRHS-24 for the field test in Sandusky, MI. Please forward to Wasserstrom.

Thank you and have a great weekend.

John

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

Phone: 314-231-1130
Fax: 314-231-5074

Duke Manufacturing CR s.r.o.
Building #DC6A, ProLogis Park Prague D1 East,
Na Dlouhem 86,
Jazlovice-Ricany 251 01
Czech Republic
VAT Number is CZ680789120
Phone: +420 323 608 193

Quote

Quote Number: 88679

Date:	9/26/2014
Page:	1 of 1
Drawing:	

We are pleased to quote the following based on Duke Manufacturing Co.'s standards of design, materials, finish, and workmanship.
Any deviation from equipment, as listed below, may void the quoted price.
The following prices are firm for 90 days from date of quote.

Quote To:

N. Wasserstrom & Sons
2300 Lockbourne Road
Columbus OH 43207
US

NWSPurchasing@wasserstrom.com

Sales Rep: Daly and DeRoma Group

Regional Sales Manager:

Ship Point: 65301

Customer #: 89630

Project Description: IDQ Sandusky, MI IRHS-24 Test

Part Number	Description	Weight Frt Class	Quantity	Net Price	Extended Net
	Item 1				
IRHS24-2084T2R	IRHS, 2x4, 208V, right, RT, 2 sides	200.00 Lbs	1	2,938.00	2,938.00
	Item 2				
E030951	TRIVET, METAL, 1/3 SIZE PAN	0.00 Lbs	2	0.00	0.00
	Item 3				
1030-2859	IRHS, COVER PAN SHEETMETAL VERSION	0.00 Lbs	2	0.00	0.00

IDQ - Sandusky, MI - IRHS-24 test

It is a one-time price for a field test good through 12-31-14 for one unit. and will be replaced with FWM-24, at no charge, if requested.

Please contact Bob Booker (Ext. 355) for assistance.

LineTotal:	**$**	**2,938.00**
Line Miscellaneous Charges:	**$**	**0.00**
Header Miscellaneous Charges:	**$**	**0.00**
Quote Total:	**$**	**2,938.00**

The transaction contemplated by this document and any related documents shall be subject to and governed by the Terms of Sale which are available at **www.Dukemfg.com/terms**, and such Terms of Sale are incorporated in full by this reference. Duke Manufacturing Co., and any subsidiaries, reject any other terms or conditions whether presented verbally, in any other documents (including without limitation purchase orders, acknowledgments, confirmations, or bills of lading), or otherwise.

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
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Product Holding Unit - Infra Red Heat Sink

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- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

CLASSIFIED UL EPH

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

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314.231.5074 Fax
www.dukemfg.com

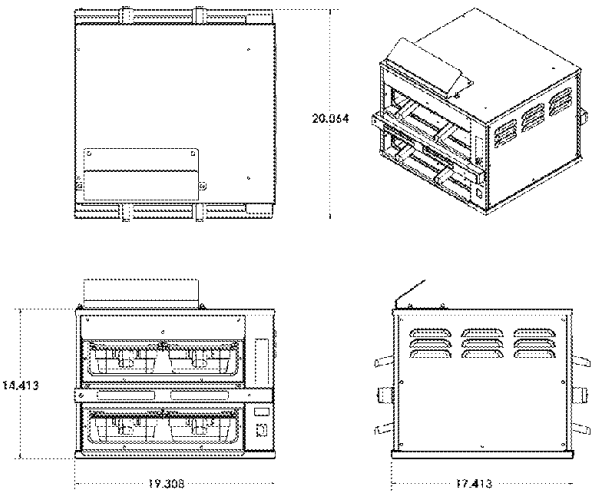
SHORT FORM SPECIFICATIONS:

Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

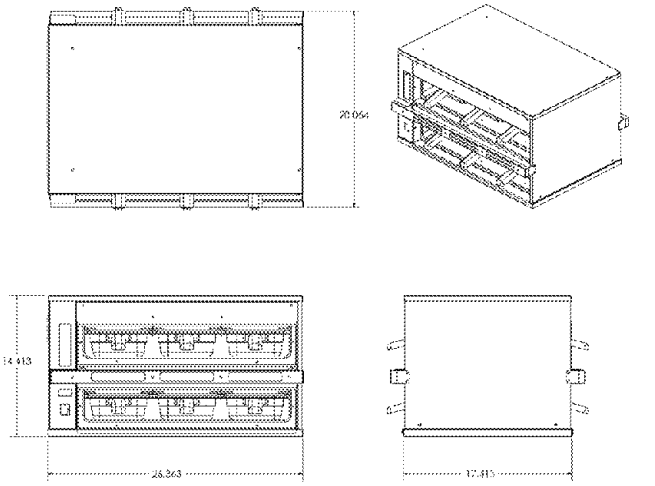
DRAFT

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

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2305 N. Broadway
St. Louis, MO 63102

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800.231.1130 In Missouri
314.231.5074 Fax
www.dukemfg.com

Your Solutions Partner

Specification subject to change

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E-MAIL 22

From: Matt Turner [matt@amaofthecarolinas.com]
Sent: 9/29/2014 8:23:26 PM
To: Kathy Veder [kveder@dukemfg.com]
Subject: FW: IRHS holding cabinet follow up
Attachments: Duke IRHS Spec Sheet.pdf

Hey Kathy,

I'm sure John looped you in on everything he had going on – I wanted to check on the status of a test unit for Boddie-Noell (Hardee's). This was the last email I saw on it, not sure if there's been more since then.

Thanks,
Matt

Matthew Turner
AMA of the Carolinas
Tel: 919-883-5613
Fax: 240-332-1077

From: John Ulrich [mailto:julrich@dukemfg.com]
Sent: Thursday, September 18, 2014 9:03 AM
To: Bill Boddie Jr.
Cc: Matt Turner
Subject: RE: IRHS holding cabinet follow up

Bill,

No confusion here so we are all good.

We are close. We have a three high by four across. It is 208V, 14.3Amps (6-20 plug). It is 4 amps more than your current Prince Castle 208V (6-15 plug) two high by four wide holding unit. Would this work?

John

From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]
Sent: Thursday, September 18, 2014 7:28 AM
To: John Ulrich
Subject: FW: IRHS holding cabinet follow up

John,

Mike Boddie sent me the email below right after I responded back to you this morning on the go ahead. Do you guys have a cabinet that is 3 drawers across and 3 drawers tall with the correct wattage? If so, we would like to test that cabinet out instead of the initial cabinet mentioned.

Sorry for the confusion and please feel free to call me if you have any questions.

Thanks,

Bill Boddie Jr

Operations/Services Manager
Phone: 252-937-2800 ext. 1211

Email: Billboddiejr@boddienoell.com

From: Mike Boddie
Sent: Thursday, September 18, 2014 7:57 AM
To: Bill Boddie Jr.; Laura Joyner
Cc: Johnny Thompson; Tim Lane
Subject: RE: IRHS holding cabinet follow up

Bill,

Ask John Ulrich if Duke has a cabinet that is three drawers across and three drawers tall. This way if it works in the test kitchen we can test it in North Wesleyan where the Marshall cabinet is with the same drawer set up. This would also be the set up we have planned for new stores.

Thanks,

Mike

From: Bill Boddie Jr.
Sent: Wednesday, September 17, 2014 9:05 PM
To: Laura Joyner
Cc: Mike Boddie; Johnny Thompson; Tim Lane
Subject: Re: IRHS holding cabinet follow up

Yes, we will test in kitchen then try it out in a unit. It is the same cabinet with the correct wattage

Thanks,

Bill Boddie Jr
Boddie Noell Enterprises
Office: 252-937-2800 ext.1211
Cell: 252-883-9335
billboddiejr@boddienoell.com

Sent from my iPhone

On Sep 17, 2014, at 3:13 PM, "Laura Joyner" <laurajoyner@boddienoell.com> wrote:

What are your plans for testing? Initial review in the test kitchen and then testing in a unit? Is this the same unit as before (but with correct wattage)?

From: Bill Boddie Jr.
Sent: Wednesday, September 17, 2014 3:10 PM
To: Laura Joyner; Tim Lane
Cc: Mike Boddie; Johnny Thompson
Subject: Fwd: IRHS holding cabinet follow up

Laura and Tim,

Johnny Thompson and I met with John Ulrich from Duke back in June discussing to test out one of their holding cabinets (IRHS). We had many projects going on throughout the summer, so we postponed the test to September. Is it ok with you if I go ahead and respond back to John to ship the IRHS cabinet to BNE for testing?

Thanks,

Bill Boddie Jr
Boddie Noell Enterprises
Office: 252-937-2800 ext.1211
Cell: 252-883-9335
billboddiejr@boddienoell.com

Sent from my iPhone

Begin forwarded message:

From: John Ulrich <julrich@dukemfg.com>
Date: September 17, 2014 at 2:45:22 PM EDT
To: 'Bill Boddie Jr.' <billboddiejr@boddienoell.com>
Cc: 'Johnny Thompson' <johnnythompson@boddienoell.com>, Matt Turner <matt@amaofthecarolinas.com>
Subject: RE: IRHS holding cabinet follow up

Bill,

I hope that all is well and that you had a good summer. I am following up to see what your timeline is for the IRHS.

Thank you.

John

From: John Ulrich
Sent: Friday, June 27, 2014 7:00 AM
To: Bill Boddie Jr.
Cc: Johnny Thompson; Matt Turner
Subject: RE: IRHS holding cabinet follow up

Bill,

It was great talking with you guys yesterday and thank you for your time and interest in the new Duke products.

Your plan works for us so we will plan for a late August test.

Good luck with your bun baking and enjoy your summer.

All the best,

John

From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]
Sent: Wednesday, June 25, 2014 10:26 AM
To: John Ulrich

Cc: Johnny Thompson; Bill Boddie Jr.
Subject: IRHS holding cabinet follow up

John,

Thank you guys for stopping by BNE today and sharing with Johnny and I your new products. After discussion with Tim Lane and Mike Boddie on the IRHS holding cabinet test, Tim thinks it would be best to wait until the last week of August before you send us the cabinet. Laura Joyner will be busy and active with testing other equipment throughout July and August.

I will send you a reminder John the last week of August for shipment on the IRHS. We will test the cabinet at the home office first and then discuss a restaurant for testing.

Thanks again for stopping by and travel safely back to St. Louis my friend! Have fun in Charleston tomorrow!

Thanks,

Bill Boddie Jr

Operations/Services Manager
Phone: 252-937-2800 ext. 1211
Email: Billboddiejr@boddienoell.com

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Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

SHORT FORM SPECIFICATIONS:

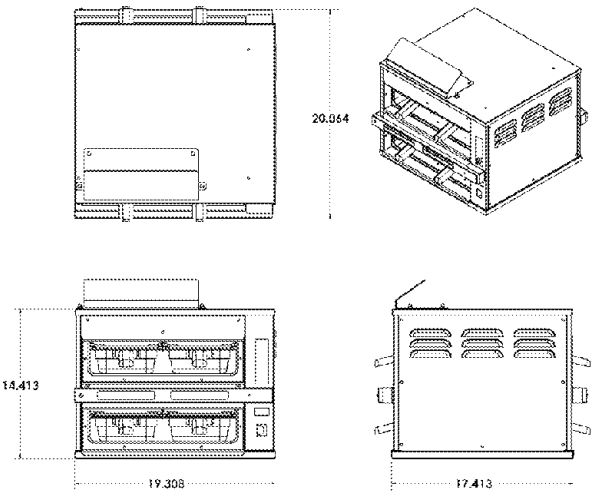
Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

DRAFT

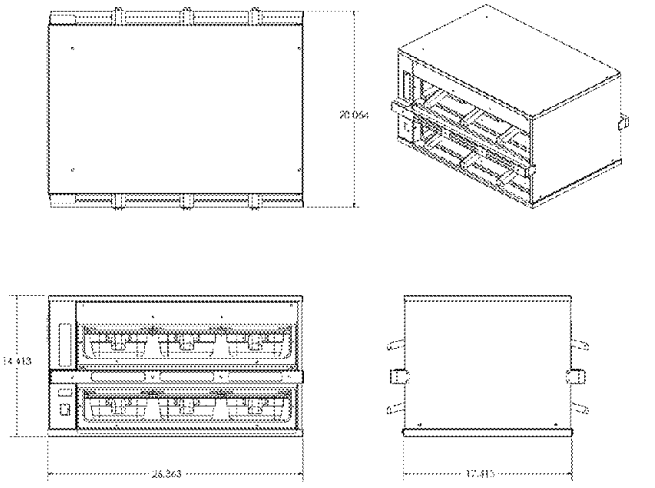
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS: FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

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E-MAIL 23

From: Kathy Veder [/O=DUKEMFGCO/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=KATHY VEDER604]
Sent: 10/21/2014 2:37:17 PM
To: Matt Turner [matt@amaofthecarolinas.com]
CC: Ralph Macy [rmacy@dukemfg.com]; Brent Cook [bcook@dukemfg.com]
Subject: RE: IRHS holding cabinet follow up
Attachments: IRHS Spec Sheet.pdf

Matt,
Are they set on a 2 x 4 unit? We have a 3 by 4 unit coming back that was not used...

Attached is the spec sheet but want to make sure you knew come of these models are not available (like 120V).

Thanks,
Kathy

Kathy Veder, CFSP
VP Strategic National Accounts
Duke Manufacturing
314.239.6266
kveder@dukemfg.com

From: Matt Turner [mailto:matt@amaofthecarolinas.com]
Sent: Monday, October 20, 2014 3:41 PM
To: Kathy Veder
Cc: Ralph Macy; Brent Cook
Subject: RE: IRHS holding cabinet follow up

Excellent, thank you. Can you confirm all the other electrical requirements and the plug? What is in the recent brochure is different from what john had emailed them. I'll then confirm all with them.

Thanks,
Matt

Matthew Turner
AMA of the Carolinas
Tel: 919-883-5613
Fax: 240-332-1077

Sent from a mobile device, please pardon my brevity.

On Oct 19, 2014 11:12 AM, "Kathy Veder" <kveder@dukemfg.com> wrote:
Matt,
We will agree to send a unit since John previously said yes but in the future we will need a more definite opportunity prior to sending a test unit.

Please confirm the configuration (208v - 2 by 4), where the unit should be shipped. We will set up the website but are assuming you will load the setpoints, products (4 letter abbreviations) etc.

Thanks Matt!
Kathy

Kathy Veder, CFSP
VP Strategic National Accounts
Duke Manufacturing
314.239.6266
kveder@dukemfg.com

-----Original Message-----
From: Matt Turner [mailto:matt@amaofthecarolinas.com]
Sent: Friday, October 17, 2014 1:50 PM
To: Kathy Veder
Subject: FW: IRHS holding cabinet follow up

Not as clear of a response as I'd wanted, but they are aware. I'm not sure they know what they want, honestly, so there may be a chance to impress them on the hold times and prove the worth of the IRHS.

Matthew Turner
AMA of the Carolinas
Tel: 919-883-5613
Fax: 240-332-1077

-----Original Message-----
From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]
Sent: Friday, October 17, 2014 12:40 PM
To: Matt Turner
Subject: Re: IRHS holding cabinet follow up

Hey Matt,

Thank you for the clarification and making sure the IRHS is what we are looking for. We will stick with the IRHS unit and give it a try--- i will keep in mind the "heat sink unit" as you suggested--- if the IRHS don't suit our needs, we might give the heat sink unit a shot.

Have a great weekend!

Thanks,

Bill Boddie Jr
Boddie Noell Enterprises
Office: 252-937-2800 ext.1211
Cell: 252-883-9335
billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com>

Sent from my iPhone

On Oct 17, 2014, at 11:42 AM, Matt Turner
<matt@amaofthecarolinas.com<mailto:matt@amaofthecarolinas.com>> wrote:

Hi Bill,

I think I've gotten some clarification on Duke's questioning. The IRHS unit is a good deal more expensive than the others you're testing, but the unit would have improved performance to match. They just want to be sure that's what you're looking before they send a unit out so they're as competitive as possible in the right areas. A heat sink unit would be more in line with the others you're testing, but I'll push to get you guys whichever fits your needs best. Just let me know and I'll have them get one out ASAP. You guys have a great weekend!

Thank you,
Matt

Matthew Turner
AMA of the Carolinas
Tel: 919-883-5613
Fax: 240-332-1077

From: Bill Boddie Jr.
[mailto:billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com>]
Sent: Tuesday, October 14, 2014 10:27 AM
To: 'Matt Turner'
Cc: Mike Boddie; Tim Lane; Johnny Thompson
Subject: RE: IRHS holding cabinet follow up

Matt,

I answered your questions below highlighted in red regarding the holding cabinet. Please let me know if you have any questions.

Thanks,

Bill Boddie Jr

Operations/Services Manager

Phone: 252-937-2800 ext. 1211

Email: Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com>

-----Original Message-----
From: Matt Turner [mailto:matt@amaofthecarolinas.com]
Sent: Monday, October 13, 2014 2:31 PM
To: Bill Boddie Jr.
Subject: RE: IRHS holding cabinet follow up

Hi Bill,

Duke had a few questions before they sent a unit just to make sure they

understand the situation, please let me know as best you can:

1) What is your target price for the unit?

- we are currently testing Marshall Air and Prince Castle holding cabinets in some of our units--- I can't divulge pricing--- want to be fair with Marshall Air & Prince Castle

2) What are your testing criteria - are there any

benchmarks/qualifications you're looking for?

- we would like to test the 8 pan IRHS - 24 (208V watts) with controls on both sides of unit (holding times (30 minutes) and temp. of products & quality

3) If approved, how many units do you think you'd be ordering per year?

- not sure as of now--- would like to test one in the test kitchen here at BNE first and then move it to a close by restaurant in Rocky Mount for test

I'm available by phone or I can drop by anytime if I can be of any help.

Thanks,

Matt

Matthew Turner

AMA of the Carolinas

Tel: 919-883-5613

Fax: 240-332-1077

-----Original Message-----

From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]

Sent: Tuesday, October 07, 2014 7:51 PM

To: Matt Turner

Subject: Re: IRHS holding cabinet follow up

Thank you Matt

Thanks,

Bill Boddie Jr

Boddie Noell Enterprises

Office: 252-937-2800 ext.1211

Cell: 252-883-9335

billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com%3cmailto:billboddiejr@boddienoell.com>>

Sent from my iPhone

On Oct 7, 2014, at 2:40 PM, "Matt Turner"

<matt@amaofthecarolinas.com<mailto:matt@amaofthecarolinas.com<mailto:matt@amaofthecarolinas.com%3cmailto:matt@amaofthecarolinas.com>>> wrote:

I remember that meeting - I was the local guy that brought him out, I

enjoyed meeting you guys as well.

We've got a conference call scheduled for this Friday with his

replacement, so I'll go over everything with her then. You have a great

week as well!

Thanks,

Matt

Matthew Turner

AMA of the Carolinas

Tel: 919-883-5613

Fax: 240-332-1077

From: Bill Boddie Jr.

[mailto:billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com>< mailto:billboddiejr@boddienoell.com%3cmailto:billboddiejr@boddienoell.com% 3e>]

Sent: Tuesday, October 07, 2014 10:38 AM

To: 'Matt@amaofthecarolinas.com<mailto:Matt@amaofthecarolinas.com><mailto:Matt @amaofthecarolinas.com>'

Subject: FW: IRHS holding cabinet follow up

Good Morning Matt,

Sorry to hear John is no longer with you--- I had the pleasure meeting him face to face at BNE a couple months ago and he is a great guy.

Below you will see our communications on the cabinet--- we would like to test the 8 pan IRHS - 24 (controls on both sides) if you have it in stock. Let me know if you have any questions Matt and we are looking forward to trying it out.

Have a great week!

Thanks,

Bill Boddie Jr

Operations/Services Manager

Phone: 252-937-2800 ext. 1211

Email: Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com%3cmailto:Billboddiejr@boddienoell.com>>

From: John Ulrich [mailto:julrich@dukemfg.com]

Sent: Thursday, September 18, 2014 11:58 AM

To: Bill Boddie Jr.

Cc: Matt Turner

Subject: RE: IRHS holding cabinet follow up

Yes, it does.

I will see what is available for testing.

John

From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]

Sent: Thursday, September 18, 2014 10:27 AM

To: John Ulrich

Subject: FW: IRHS holding cabinet follow up

John,

We would like to test the 8 pan IRHS-24--- does the cabinet have controls

on both sides?

Thanks,

Bill Boddie Jr

Operations/Services Manager

Phone: 252-937-2800 ext. 1211

Email:
Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com%3cmailto:Billboddiejr@boddienoell.com>>

From: Mike Boddie

Sent: Thursday, September 18, 2014 10:53 AM

To: Bill Boddie Jr.; Johnny Thompson

Subject: RE: IRHS holding cabinet follow up

Bill,

Let's test the 8 pan IRHS-24.

We need to make sure the Duke cabinet has controls on both sides.

Mike

From: Bill Boddie Jr.

Sent: Thursday, September 18, 2014 10:31 AM

To: Johnny Thompson

Cc: Mike Boddie

Subject: Re: IRHS holding cabinet follow up

Thanks Johnny---

Mike, which cabinet do you think we need to test--- 8 pan or 12 pan?

Thanks,

Bill Boddie Jr

Boddie Noell Enterprises

Office: 252-937-2800 ext.1211

Cell: 252-883-9335

billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com%3cmailto:billboddiejr@boddienoell.com>>

Sent from my iPhone

On Sep 18, 2014, at 10:16 AM, "Johnny Thompson"

<johnnythompson@boddienoell.com<mailto:johnnythompson@boddienoell.com<mailto:johnnythompson@boddienoell.com%3cmailto:johnnythompson@boddienoell.com>>>

wrote:

I measured for the Duke Cabinet and either the IRHS-24(8 pan) or IRHS-34912 pan) will fit, but will leave no extra room on the shelf. The Marshall holding bins are 120 volt 13.1 amps so an electric circuit would have to be added for the Duke unit, both are 208 volt.

Thanks,

Johnny

From: Mike Boddie

Sent: Thursday, September 18, 2014 9:45 AM

To: Bill Boddie Jr.; Johnny Thompson

Subject: RE: IRHS holding cabinet follow up

It should but let me measure the area at North Wesleyan today to make sure.

MIke

From: Bill Boddie Jr.

Sent: Thursday, September 18, 2014 9:15 AM

To: Johnny Thompson; Mike Boddie

Subject: FW: IRHS holding cabinet follow up

Johnny and Mike,

Will this work?

Thanks,

Bill Boddie Jr

Operations/Services Manager

Phone: 252-937-2800 ext. 1211

Email: Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com%3cmailto:Billboddiejr@boddienoell.com>>

From: John Ulrich [mailto:julrich@dukemfg.com]

Sent: Thursday, September 18, 2014 9:03 AM

To: Bill Boddie Jr.

Cc: Matt Turner

Subject: RE: IRHS holding cabinet follow up

Bill,

No confusion here so we are all good.

We are close. We have a three high by four across. It is 208V, 14.3Amps (6-20 plug). It is 4 amps more than your current Prince Castle 208V (6-15 plug) two high by four wide holding unit. Would this work?

John

From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]

Sent: Thursday, September 18, 2014 7:28 AM

To: John Ulrich

Subject: FW: IRHS holding cabinet follow up

John,

Do you guys have a cabinet that is 3 drawers across and 3 drawers tall with the correct wattage? If so, we would like to test that cabinet out instead of the initial cabinet mentioned.

Sorry for the confusion and please feel free to call me if you have any questions.

Thanks,

Bill Boddie Jr

Operations/Services Manager

Phone: 252-937-2800 ext. 1211

Email:
Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com%3cmailto:Billboddiejr@boddienoell.com>>

From: Mike Boddie

Sent: Thursday, September 18, 2014 7:57 AM

To: Bill Boddie Jr.; Laura Joyner

Cc: Johnny Thompson; Tim Lane

Subject: RE: IRHS holding cabinet follow up

Bill,

Ask John Ulrich if Duke has a cabinet that is three drawers across and three drawers tall. This way if it works in the test kitchen we can test it in North Wesleyan where the Marshall cabinet is with the same drawer set up. This would also be the set up we have planned for new stores.

Thanks,

Mike

From: Bill Boddie Jr.

Sent: Wednesday, September 17, 2014 9:05 PM

To: Laura Joyner

Cc: Mike Boddie; Johnny Thompson; Tim Lane

Subject: Re: IRHS holding cabinet follow up

Yes, we will test in kitchen then try it out in a unit. It is the same

cabinet with the correct wattage Thanks,

Bill Boddie Jr

Boddie Noell Enterprises

Office: 252-937-2800 ext.1211

Cell: 252-883-9335

billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com%3cmailto:billboddiejr@boddienoell.com>>

Sent from my iPhone

On Sep 17, 2014, at 3:13 PM, "Laura Joyner"

<laurajoyner@boddienoell.com<mailto:laurajoyner@boddienoell.com<mailto:laurajoyner@boddienoell.com%3cmailto:laurajoyner@boddienoell.com>>> wrote:

What are your plans for testing? Initial review in the test kitchen and then testing in a unit? Is this the same unit as before (but with correct wattage)?

From: Bill Boddie Jr.

Sent: Wednesday, September 17, 2014 3:10 PM

To: Laura Joyner; Tim Lane

Cc: Mike Boddie; Johnny Thompson

Subject: Fwd: IRHS holding cabinet follow up

Laura and Tim,

Johnny Thompson and I met with John Ulrich from Duke back in June discussing to test out one of their holding cabinets (IRHS). We had many projects going on throughout the summer, so we postponed the test to September. Is it ok with you if I go ahead and respond back to John to ship the IRHS cabinet to BNE for testing?

Thanks,

Bill Boddie Jr

Boddie Noell Enterprises

Office: 252-937-2800 ext.1211

Cell: 252-883-9335

billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com%3cmailto:billboddiejr@boddienoell.com>>

Sent from my iPhone

Begin forwarded message:

From: John Ulrich
<julrich@dukemfg.com<mailto:julrich@dukemfg.com<mailto:julrich@dukemfg.com%3cmailto:julrich@dukemfg.com>>>

Date: September 17, 2014 at 2:45:22 PM EDT

To: 'Bill Boddie Jr.'

<billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com<mailto:billboddiejr@boddienoell.com%3cmailto:billboddiejr@boddienoell.com>>>

Cc: 'Johnny Thompson'

<johnnythompson@boddienoell.com<mailto:johnnythompson@boddienoell.com<mailto:johnnythompson@boddienoell.com%3cmailto:johnnythompson@boddienoell.com>>>,

Matt Turner

<matt@amaofthecarolinas.com<mailto:matt@amaofthecarolinas.com<mailto:matt@amaofthecarolinas.com%3cmailto:matt@amaofthecarolinas.com>>>

Subject: RE: IRHS holding cabinet follow up Bill,

I hope that all is well and that you had a good summer. I am following up

to see what your timeline is for the IRHS.

Thank you.

John

From: John Ulrich

Sent: Friday, June 27, 2014 7:00 AM

To: Bill Boddie Jr.

Cc: Johnny Thompson; Matt Turner

Subject: RE: IRHS holding cabinet follow up

Bill,

It was great talking with you guys yesterday and thank you for your time

and interest in the new Duke products.

Your plan works for us so we will plan for a late August test.

Good luck with your bun baking and enjoy your summer.

All the best,

John

From: Bill Boddie Jr. [mailto:billboddiejr@boddienoell.com]

Sent: Wednesday, June 25, 2014 10:26 AM

To: John Ulrich

Cc: Johnny Thompson; Bill Boddie Jr.

Subject: IRHS holding cabinet follow up

John,

Thank you guys for stopping by BNE today and sharing with Johnny and I

your new products. After discussion with Tim Lane and Mike Boddie on the IRHS holding cabinet test, Tim thinks it would be best to wait until the last week of August before you send us the cabinet. Laura Joyner will be busy and active with testing other equipment throughout July and August.

I will send you a reminder John the last week of August for shipment on the IRHS. We will test the cabinet at the home office first and then discuss a restaurant for testing.

Thanks again for stopping by and travel safely back to St. Louis my friend! Have fun in Charleston tomorrow!

Thanks,

Bill Boddie Jr

Operations/Services Manager

Phone: 252-937-2800 ext. 1211

Email: Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com<mailto:Billboddiejr@boddienoell.com%3cmailto:Billboddiejr@boddienoell.com>>

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Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____

ITEM: _____

QUANTITY: _____



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

AGENCY LISTING:

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

SHORT FORM SPECIFICATIONS:

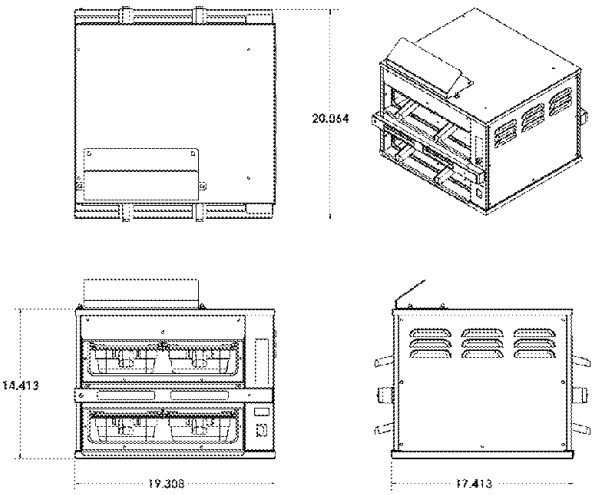
Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

DRAFT

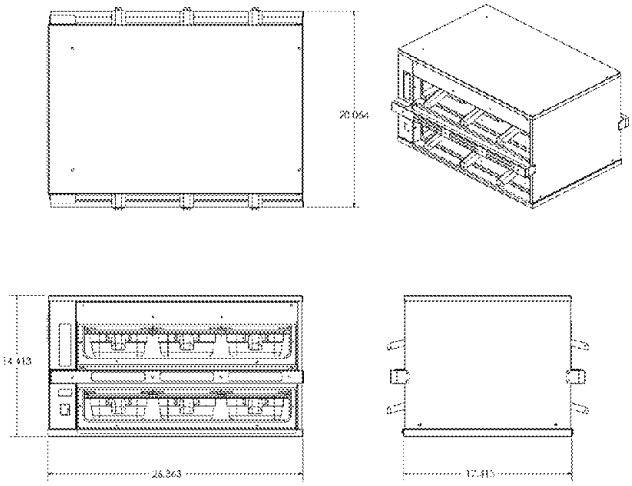
Duke®

PRODUCT HOLDING UNIT - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across



IRHS-22



IRHS-23

DIMENSIONS:

FREIGHT CLASS: 100

Model	Height		Width		Depth		Cube ft.	Crated Ship Weight	
	in	cm	in	cm	in	cm	crated	lbs	kg
IRHS-22	14.42	36.62	19.3	49.02	17.42	44.24	5.6	100	45.6
IRHS-23	14.42	36.62	26.36	66.95	17.42	44.24	7.3	125	56.7
IRHS-24	14.42	36.62	33.42	84.88	17.42	44.24	8.0	150	68.0
IRHS-34	20.92	53.13	33.42	84.88	17.42	44.24	10.5	200	90.7

ELECTRICAL SPECIFICATIONS:

Model	120 Volt - Hz 50/60		208 Volt - Hz 50/60		240 Volt - Hz 50/60	
	Amps	NEMA	Amps	NEMA	Amps	NEMA
IRHS-22	8.3	5-15P	4.9	6-15P	4.2	6-15P
IRHS-23	12.4	5-20P	7.2	6-15P	6.3	6-15P
IRHS-24			9.5	6-15P	8.3	6-15P
IRHS-34			14.3	6-20P	13.4	6-20P

EPEDITE COUNTER

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

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800.231.1130 In Missouri
314.231.5074 Fax
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