Your Solutions Partner

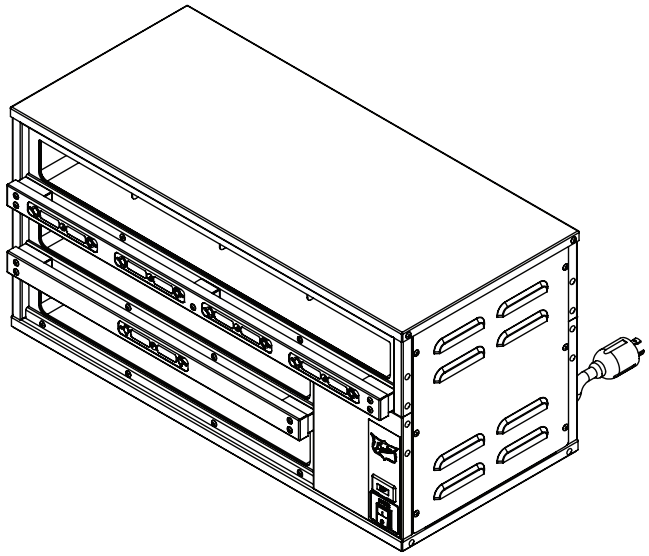
Installation and Operation Manual

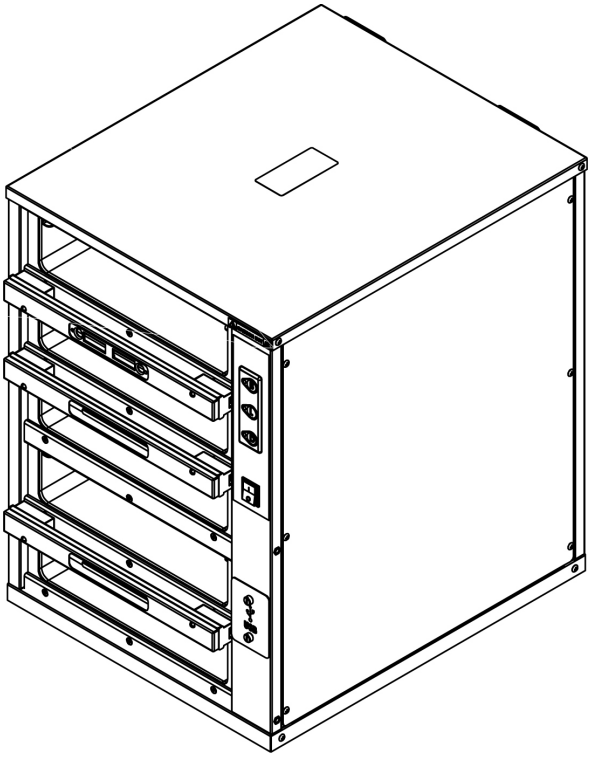
MUHC

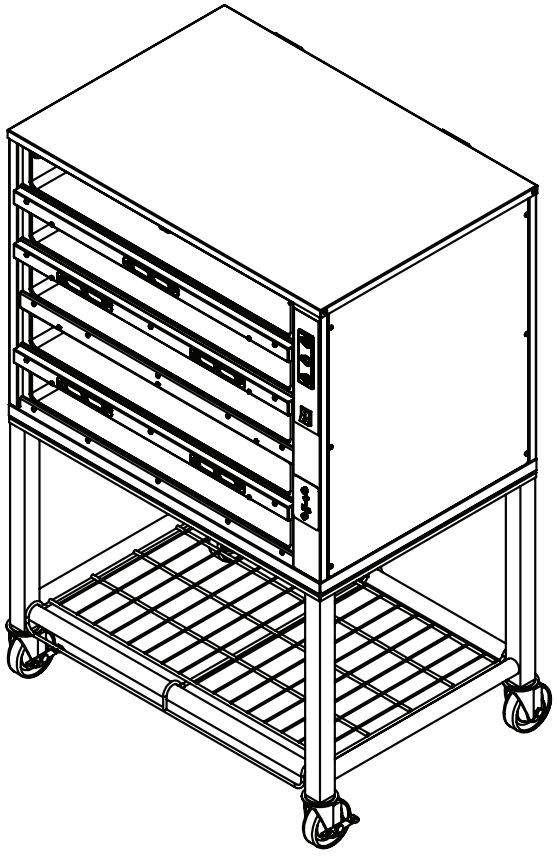
(MULTI-USE HOLDING CABINET)

MODEL

MUHC 51 SERIES
MUHC 52 SERIES
MUHC 34 SERIES







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

P/N 165008
REV N 11/10/2021

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SAFETY INFORMATION

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL ELECTRICAL EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD STARTUP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

READ THIS MANUAL THOROUGHLY BEFORE OPERATING, INSTALLING OR PERFORMING MAINTENANCE ON THE EQUIPMENT.

⚠WARNING: Failure to follow all the instructions in this manual can cause property damage, injury or death.

⚠WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death.

⚠WARNING: (US/CAN ONLY) Electrical connections should be performed only by a certified professional.

⚠WARNING: Electrical and grounding connections must comply with the applicable portions of the National Electric Code and/or all local electric codes. Failure to comply with this procedure can cause property damage, injury or death.

⚠WARNING: Before connecting the unit to the electrical supply, verify that the electrical and grounding connections comply with the applicable portions of the National Electric Code and/or other local electrical codes. Failure to comply with this procedure can cause property damage, injury or death.

⚠WARNING: Before connecting the unit to the electrical supply, verify that the electrical connection agrees with the specifications on the data plate. Failure to comply with this procedure can cause property damage, injury or death.

⚠WARNING: UL73 grounding instructions: This appliance must be connected to a grounded, metal, permanent wiring system. Or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the appliance. Failure to comply with this procedure can cause property damage, injury or death.

⚠WARNING: Appliances equipped with a flexible electric supply cord, are provided with a three-prong grounding plug (or a CEE7 Plug for International CE Units). It is imperative that this plug be connected into a properly grounded receptacle. Failure to comply with this procedure can cause property damage, injury or death.

⚠WARNING: If the receptacle is not the proper grounding type, contact an electrician. Do not remove the grounding prong from the plug. Failure to comply with this procedure can cause property damage, injury or death.

SAFETY INFORMATION - continued

⚠WARNING: Before performing any service that involves electrical connection or disconnection and/or exposure to electrical components, always perform the Electrical LOCKOUT/TAGOUT Procedure. Disconnect all circuits. Failure to comply with this procedure can cause property damage, injury or death.

⚠WARNING: Before removing any access panels or servicing this equipment, always perform the Electrical LOCKOUT/TAGOUT Procedure. Be sure all circuits are disconnected. Failure to comply with this procedure can cause property damage, injury or death.

⚠WARNING: Do not operate this equipment without properly placing and securing all covers and access panels. Failure to comply with this procedure can cause property damage, injury or death.

⚠WARNING: For your safety, do not use or store gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. Failure to comply can cause property damage, injury or death.

⚠WARNING: In the event of a power failure, do not attempt to operate this appliance. Failure to comply can cause property damage, injury or death.

⚠WARNING: This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

⚠CAUTION : Never use a high-pressure water wash for this cleaning procedure as water can damage electrical components

⚠CAUTION

Observe the following:

- Minimum clearances must be maintained from all walls and combustible materials.
- Keep the equipment area free and clear of combustible material.
- Maintain adequate clearance for air openings.
- Operate equipment only on the type of electricity indicated on the data sticker.
- Retain this manual for future reference.

INTRODUCTION

The Duke MUHC was developed for extended food-holding capabilities to provide consistently high, "just cooked" food quality.

The MUHC utilizes Duke's patented "heat sink" holding technology that provides even heat distribution to food pans through the bottom and sides. This allows pre-cooked foods to be held for extended periods without noticeable degradation of quality, reducing food scrap/waste.

The self contained, individually formed, sealed compartments of the MUHC eliminates food odor and taste transfer. Because the compartments are sealed and feature fully radiused corners, no disassembly is required for cleaning or product changes.

The unique design of the MUHC allows multiple temperature operation for all existing product groups.

SERIAL NUMBER LOCATION

The Serial Number Data Label is located on the rear of the unit, above the power cord connection. Refer to the Serial Number Data Label for proper electrical requirements. The serial number and model number are required when communicating with the Duke Service Dept.

INSTALLATION

Before installing, verify that the electrical service agrees with the specifications on the data label located on the rear of the unit, above the power cord connection. If the electrical service does not agree with the data label, do not proceed with installation. Contact your dealer or local Authorized Duke Servicer immediately.

UNPACKING

1. Inspect the shipping carton and/or container, carefully noting any exterior damage on the delivery receipt.
2. 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.
3. Unpack and Inspect the unit for damage.
4. Report any dents or breakage to the source of purchase immediately.

NOTICE: Do not attempt to use the unit if damaged.

5. Remove all materials from the unit interior.
6. If the unit has been stored in extremely cold area, wait a few hours before connecting the power.

INSTALLATION CODES AND STANDARDS

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

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

LOCATION

⚠WARNING: To avoid risk of electrical shock or death, this unit must be grounded and plug must not be altered.

- The MUHC is designed for access from either side.
- The power outlet should be located so that plug is accessible when the unit is in place.
- Proper airflow around the unit cools its electrical components. With restricted airflow, the unit may not operate properly and life of the electrical parts is reduced.
- Install unit on level counter or floor.
- Outlet should be located so that the plug is accessible when the unit is in place.

NOTICE: Do not install the unit next to or above heat sources, such as oven or deep fat fryer.

Clearance Requirements

CLEARANCE REQUIREMENT	CLEARANCE IN/mm
Top	0/0
Right Side	1.00"/25.4 mm
Left Side	1.00"/25.4 mm
Bottom	0/0
Rear	OPEN

ELECTRICAL CONNECTION

The US MUHC models are factory wired for 120 Volts

INSTALLATION

AC, single phase, 60 Hz.

⚠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.

⚠WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

⚠WARNING

For international units, the MUHC must be installed in accordance with the following:

1. Local codes
2. European (IEC/CENELEC) Electrical Code.

⚠WARNING: DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

Refer to wiring diagram in this manual for proper connection. Do not store flammables near unit.

1. At the circuit breaker, turn off power to the circuit to which the unit is to be connected.
2. Check that the unit Power ON/OFF Switch is in the OFF position.
3. Connect the power cord on the back of the unit to the electrical power source.
4. At the circuit breaker, turn on power to the circuit.

NOTICE: If the supply cord is damaged, it must be replaced by a special cord or a special cord assembly available from Duke Manufacturing Co. or its service agent.

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.

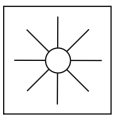
DO NOT USE AN EXTENSION CORD. If the product power cord is too short, have a qualified electrician install a three-slot receptacle (or the country specific receptacle for International Units). This unit should be plugged into a separate circuit with the electrical rating as provided on the product data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

EXTERNAL EQUIPOTENTIAL BONDING TERMINAL (EXPORT ONLY)

This equipment has supplemental bonding terminal. The terminal provides an external bonding connection used in addition to the earthing prong on the plug. The terminal provides a connection for bonding to the equipment enclosure. The external equipotential bonding terminal is located on the rear outside surface of the oven, the terminal is marked with this symbol.

OPERATION

The following procedures must be performed on a daily basis.



OPENING CHECKLIST

1. Ensure proper Pan Covers are inserted into the correct locations for fried and broiled products.
2. Place empty pans in all locations.
3. Place the Power Switch, located on the front of the MUHC, in the ON position.
4. Allow the MUHC to heat for at least 20 min. or until the temperature disappears and the menu bars display the pre-programmed product names: "EGGS", "FISH", "----" or "EMTY" (no product).

OPERATION INSTRUCTIONS AND ADJUSTMENTS

1. If the menu bars display temperature at any time during operation of the Product Holding Cabinet, discontinue use of the affected shelf until the cabinet is serviced.
2. Refer to the Keypad Programming section of the manual for instructions on using and programming the keypad.

CLOSING CHECKLIST

1. Place the Power Switch in its OFF position.
2. Remove all pans and pan covers.
3. Allow the cabinet to cool for approximately 30 minutes.
4. Refer to the Cleaning Instructions section of the manual for proper care and cleaning of the cabinet.

⚠WARNING: Electrical Shock Hazard, unplug the cabinet before cleaning it.

⚠WARNING: Do not wash with water jet or hose.

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

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

CLEANING INSTRUCTIONS

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

STAINLESS STEEL CARE

Cleaning

Stainless steel contains 70-80% iron, which will rust if not properly maintained. It also contains 12-30% chromium, which forms an invisible passive, protective film that shields against corrosion. If the film remains intact, the stainless steel will remain intact. However, if the film is damaged, the stainless steel can break down and rust. To prevent stainless steel breakdown, follow these steps:

CAUTION: Never use any metal tools. Scrapers, files, wire brushes or scouring pads (except for stainless steel scouring pads) will mar the surface.

CAUTION: Never use steel wool, which will leave behind particles that rust.

CAUTION: Never use acid-based or chloride-containing cleaning solutions, which will break down the protective film.

CAUTION: Never rub in a circular motion.

CAUTION: Never leave any food products or salt on the surface. Many foods are acidic. Salt contains chloride.

For routine cleaning, use warm water, mild soap or detergent and a sponge or soft cloth.

For heavy-duty cleaning, use warm water, a degreaser and a plastic, stainless steel or Scotch-Brite pad.

Always rinse thoroughly. Always rub gently in the direction of the steel grain.

OPERATION - continued

Preserving & Restoring

Special stainless steel polishing cleaners can preserve and restore the protective film.

Preserve the life of stainless steel with a regular application of a high quality stainless steel polishing cleaner as a final step to daily cleaning.

If signs of breakdown appear, restore the stainless steel surface. First, thoroughly clean, rinse and dry the surface. Then, on a daily basis, apply a high-quality stainless steel polish according to manufacturer's instructions.

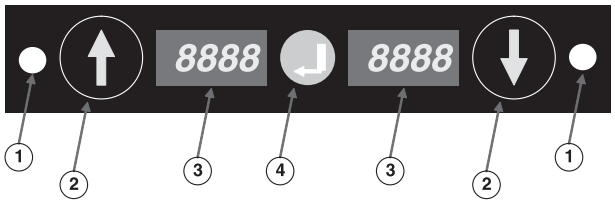
Heat Tint

Darkened areas, called heat tint, may appear on stainless steel exposed to excessive heat, which causes the protective film to thicken. It is unsightly but is not a sign of permanent damage.

To remove heat tint, follow the routine cleaning procedure. Stubborn heat tint will require heavy-duty cleaning.

To reduce heat tint, limit the exposure of equipment to excessive heat.

KEYPAD PROGRAMMING



1. Status LEDs: Used for indicating status of pan.
    a. Non-Illuminated
        I. Timer is Inactive - no product in pan,

        OR

        II. Timer is Active - product in pan – use pan with GREEN STATUS LED first.
    b. Green = Timer is Active - product in pan (use first)
    c. Flashing Green = Cook Warning Time reached (cook more product) or keyboard in EDIT MODE (programming).
2. Arrow Buttons
    a. Used for Starting/Stopping/Resetting Timer.
    b. Used for Programming.
    c. Indicate which pan the adjacent Status LED and Pan Display are linked to (i.e. Status LED and Pan Display on left side of keyboard are linked to the pan above the keyboard and the Status LED and Pan Display on right side of keyboard are linked to the pan below).
3. Pan Display
    a. When timer is inactive: Displays product name and lid type.
    b. When timer is active: Displays product name and time remaining.
4. Enter Button
    a. Used to enter Menu Mode.

Power Up

1. Place the Power Switch in the ON position. Software initializes at startup.

2. Until warmer reaches preprogrammed operating temperature, all displays will show actual temperature.

3. When the set point is reached, Product Name appears on all Pan Displays.

Note: For these instructions only the pertinent keypads will be shown, for simplicity, and not the warmer or pans. It is implied that a product pan is located above and below each keypad.

OPERATION - continued

Timer Operation

1. Press Arrow Button that corresponds to pan the product is in. (In this example, there is product in pan above keypad).

2. Status LED turns GREEN (unless same product present in another pan, then Status LED will remain non-illuminated) and Pan Display alternately shows Time Remaining and Product Name.

3. At t=cook time (set to 4 minutes) the Status LED begins FLASHING, alarm sounds and Display alternately flashes Time Remaining and Product Name.

4. Push Arrow Button to silence alarm – Status LED remains GREEN and stops flashing.

5. At t=0, alarm sounds, Status LED is FLASHING and "00:00" is FLASHING in the Display. Discard product in pan. Press corresponding Arrow Button to silence alarm and reset timer.

6. Status LED becomes non-illuminated and Display shows Product Name only. The pan is ready for more product.

Note: To reset the time when product is depleted, press and release the corresponding arrow key. The status LED will become non-illuminated any status LED on the same product will turn green, indicating use first.

Time Decrement

This program is used to alter Hold Time when introducing a product from another warming unit.

Example: Transfer CORN from another warmer with 19 minutes left on Hold Time.

1. Press and hold the Arrow Button corresponding to the pan that's being edited for three seconds. The display will appear as shown below with a FLASHING Status LED and a down arrow in the Display indicating the timer is in decrement mode.

"V" denotes timer is in decrement mode

2. Repeatedly pressing the Arrow Button decrements time by one minute per depression.
3. Holding down the button continuously will slow the time down.
4. To increment time, press the Enter Button. The arrow on display will point up to denote incrementing time as shown below.
5. Repeatedly pressing the Arrow Button increments time by one minute per depression.
6. Holding down the button continuously will slew the time up.

"∧" denotes timer is in increment mode

7. When the proper time is reached on the Display release the Arrow Button and after 5 seconds unit will accept new time and return to normal operation.

OPERATION - continued

Menu Mode

This option is used to change Meal Set and view, Linking, Hold Time and Hold Temp.

Enter Menu Mode

1. Press and hold the Enter Button for three seconds. Status LED FLASHES GREEN and "MENU" is displayed on left Display and "UP" is displayed on right, indicating upper well information will be displayed.
2. To view lower well information press the Down Arrow Button – "DOWN" will appear in the right Display. FLASHING Status LED will be present on side of keypad corresponding to well being viewed.
3. Press the Enter Button to accept.

Change Meal Set

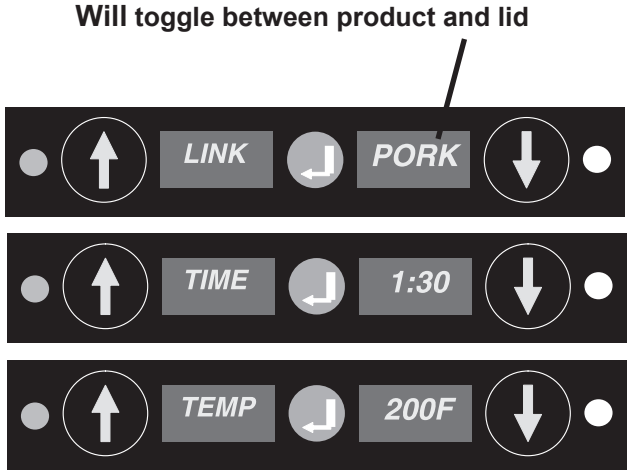
Note: The Meal Set can be changed globally from any keyboard.

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 Meal Set and press the Enter Button to accept. Status LED stops flashing and desired Meal Set is displayed.

Display Link, Hold Time & Temperature

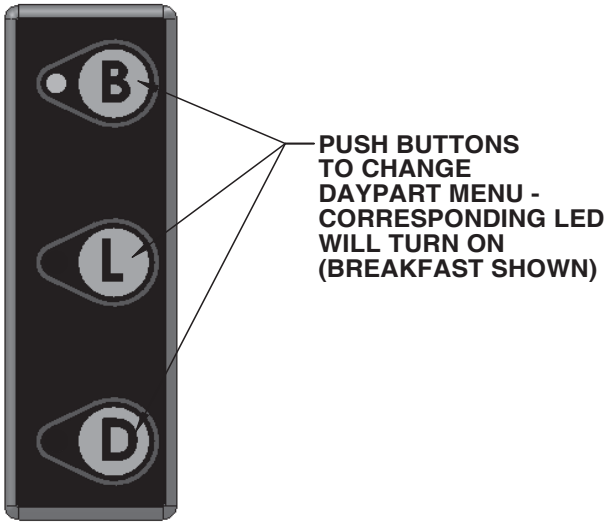
Press Arrow Button repeatedly to scroll through Link, Time and Temperature settings.



Exit Menu Mode

Scroll to EXIT and press the Enter Button to exit menu mode.

DAYPART PROGRAMMING



WEB PROGRAMMING

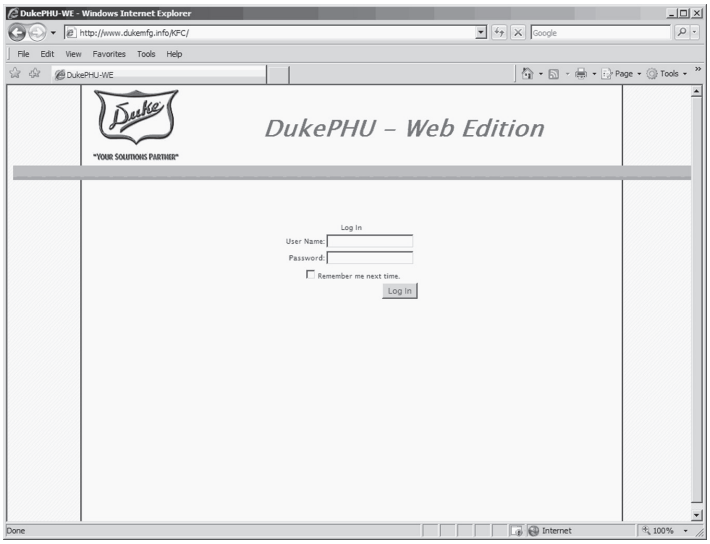
CREATING A NEW MENU

Open Internet Explorer web browser.

Type or paste the website address into the browser address dialog box and press Enter.

If your customer website has NOT been set up, please contact Duke Manufacturing's TECHNICAL SERVICE DEPARTMENT at 800-735-3853

Log into DukePHUwebsite
www.dukemfg.info/*******
Unique address & password is supplied at purchase. If needed, contact TECHNICAL SERVICE DEPARTMENT

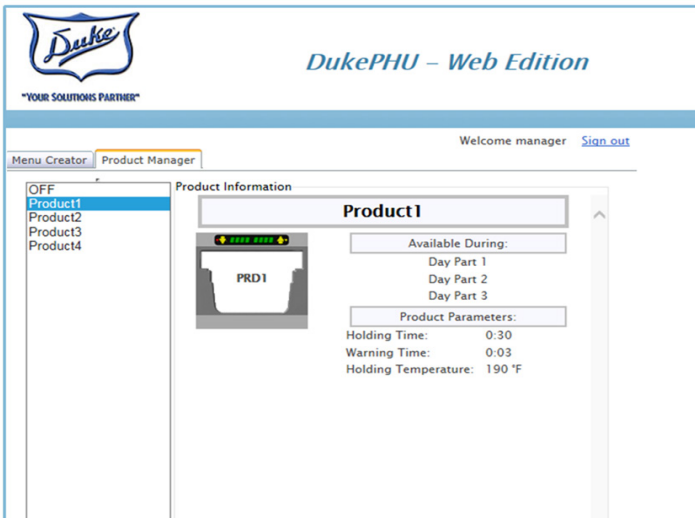


Type the assigned User Name.
Type the password.

Click the Log In button.

Click on Product Manager tab

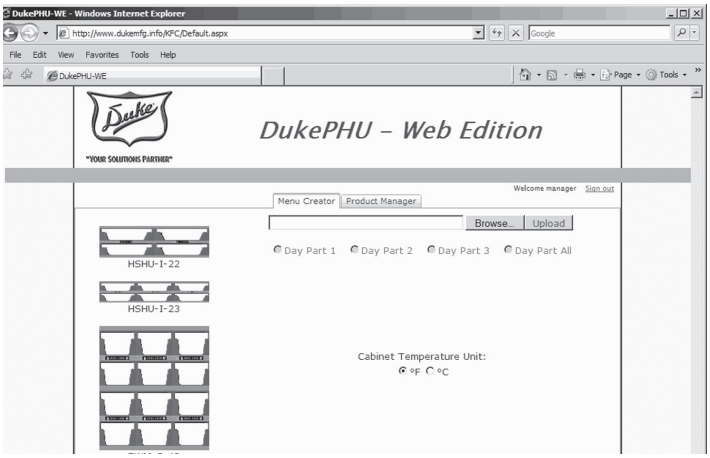
Select product and verify cook parameters are correct for all recipes.



Cabinets are configured using the Menu Creator tab.

Select the unit configuration that will be programmed.

Use scroll bar to find additional configurations.



WEB PROGRAMMING - continued

NOTE: You must program all 3 day parts EACH TIME a program is created.

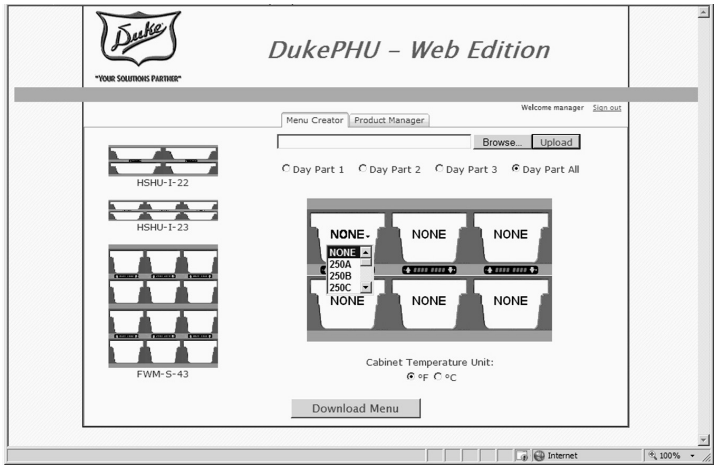
Select the day part to be programmed. If only one day part is required or if you wish for all dayparts to be the same, select Day Part All.

Select the Cabinet Temperature Units F° or C°.

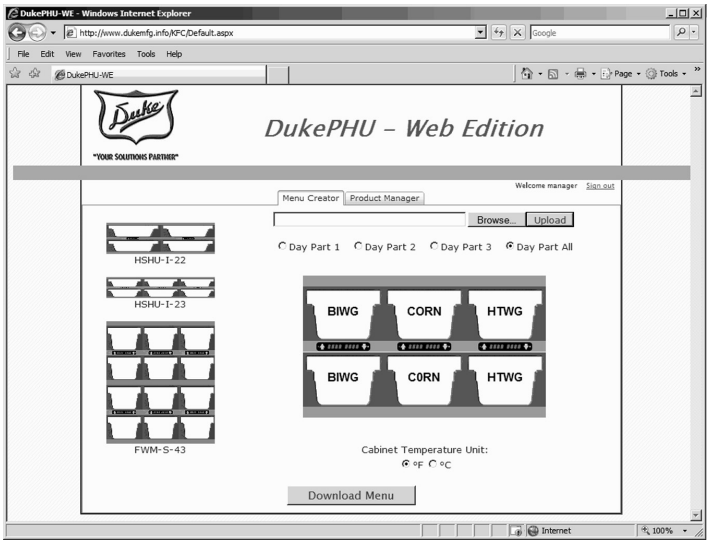
Place the curser over the well to be programmed and click to display the list
of choices.

Scroll through the drop down list and click the item to be programmed.

Click on **NONE** for each remaining well and select desired menu item from dropdown list.

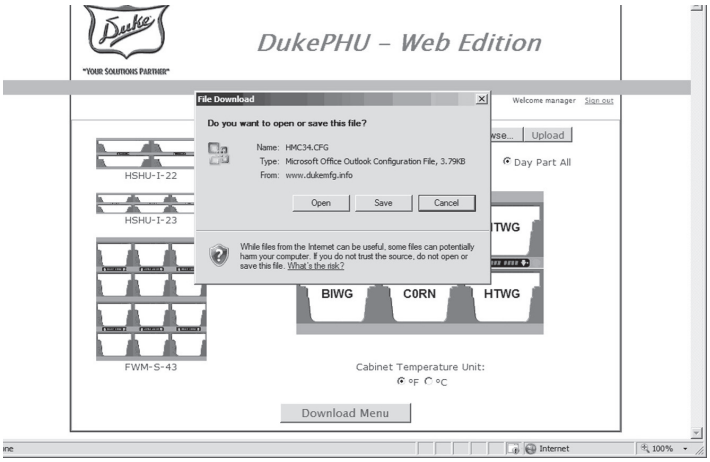


Repeat for Daypart 2 and 3



WEB PROGRAMMING - continued

NOTE: All Day Parts should be configured prior to download



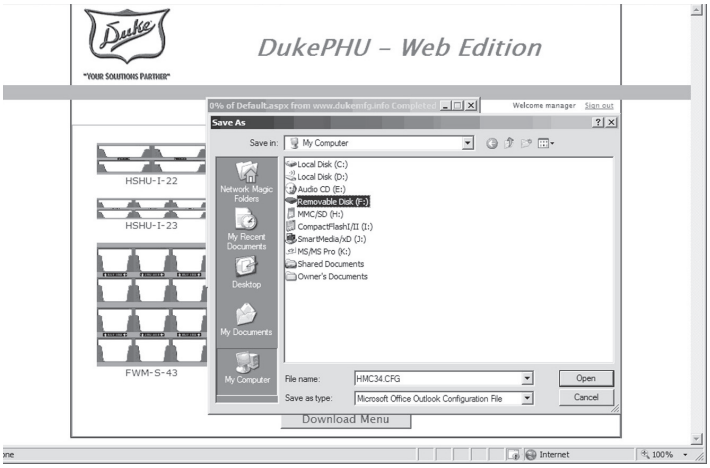
Click Download Menu
NOTE: Not all browsers will pop up with window to open or save

Click on Save

Click on Save as

The Save As dialog box will be displayed. The appearance of the screen may vary depending on the computer settings.

Ensure file is saving to Duke USB flash drive (P/N 156218)

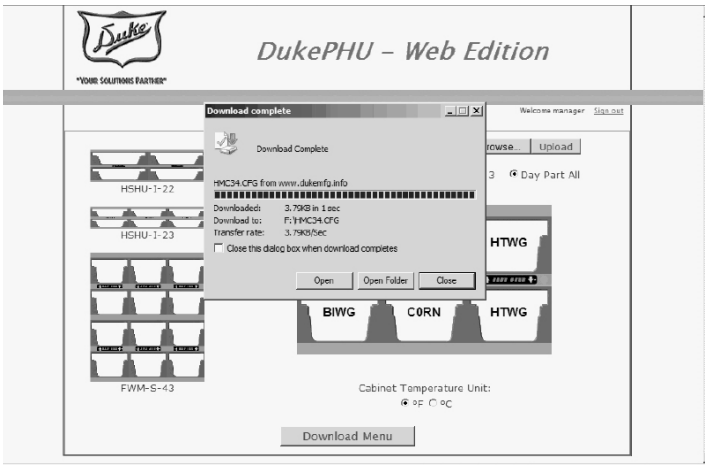


NOTE: Depending on computer settings, you may be directed to the flash drive automatically or found in download folder.

NOTE: **DO NOT** customize the filename.

Ensure the File name is only **HMC343.CFG**

Wait until the file is completely saved on the Flash drive.



Use the Flash drive's eject option to safely remove the Flash drive from the computers USB port.

WEB PROGRAMMING - continued

Move the power switch on the Duke PHU cabinet to its OFF position.

Insert the USB Flash drive into the PHU cabinet's USB port.

Turn unit to ON position

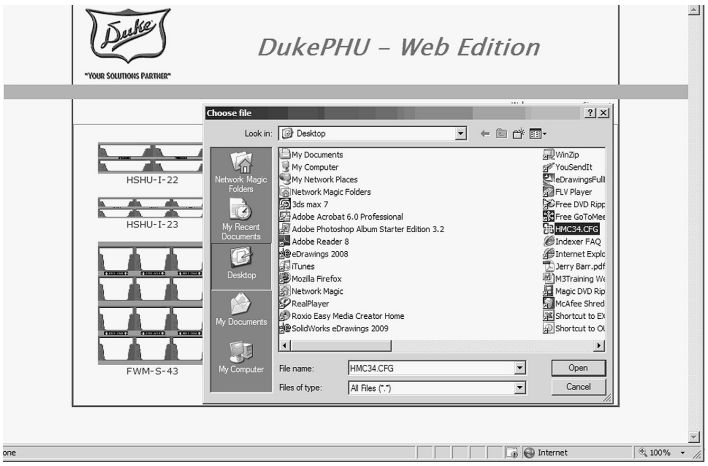
The program download will start automatically.

Download complete when produt temperatures appear. Wait up to 2 minutes for program to load. The product names will not appear on the screen until the wells heat to the selected product set point.

Remove the Flash Drive from the PHU cabinet's USB drive.

REVISING A CABINET SETTING

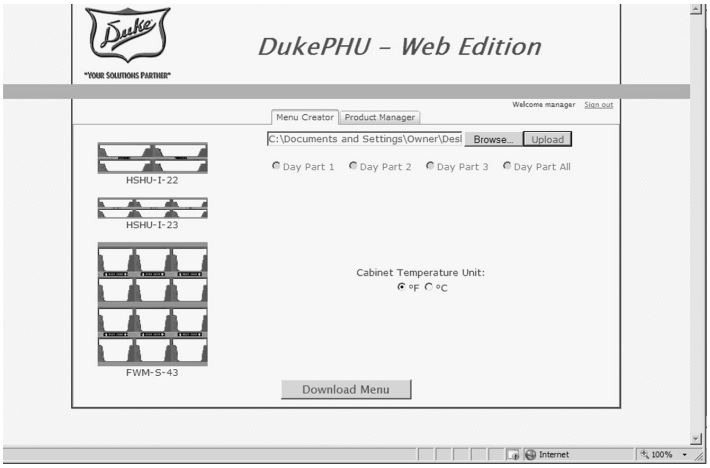
Insert a blank jump drive into the PHU. Ensure that the jump drive is blank. If an HCM34.cfm file is on the jump drive it will overwrite the programming loaded in the PHU.



If the program is on the jump drive and it is the last one loaded into the PHU insert the jump drive into a USB port on the computer.

Log onto the Website. On the Menu Creator click Browse.

Find the jump drive on the computer and locate the HCM34.cfm file.



Double click on the HCM34.cfm file. When it appears in the dialog box, click Upload.

The cabinet with all of its programmed products will appear.

Make the desired changes and repeat the download process.

CLEANING INSTRUCTIONS

CLEANING CHECKLIST

⚠WARNING: Do not wash with water jet or hose.

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

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

NOTICE: Do not use excessive amounts of water when cleaning the MUHC.

Follow these procedures to clean the MUHC:

1. Place the Power Switch in its OFF position.
2. Unplug the cabinet before cleaning.
3. Remove all pans.
4. Allow cabinet to cool for approximately 30 minutes.
5. Wipe down interior and exterior of the cabinet with warm water and mild detergent using a soft cloth.
6. Clean pans using mild detergent and warm water.
7. Ensure all soap is rinsed from Stainless Steel Lids.

STAINLESS STEEL CARE

Cleaning

Stainless steel contains 70-80% iron, which will rust if not properly maintained. It also contains 12-30% chromium, which forms an invisible passive, protective film that shields against corrosion. If the film remains intact, the stainless steel will remain intact. However, if the film is damaged, the stainless steel can break down and rust. To prevent stainless steel breakdown, follow these steps:

NOTICE: Never use any metal tools. Scrapers, files, wire brushes or scouring pads (except for stainless steel scouring pads) will mar the surface.

NOTICE: Never use steel wool, which will leave behind particles that rust.

NOTICE: Never use acid-based or chloride-containing cleaning solutions, which will break down the protective film.

NOTICE: Never rub in a circular motion.

NOTICE: Never leave any food products or salt on the surface. Many foods are acidic. Salt contains chloride.

For routine cleaning, use warm water, mild soap or detergent and a sponge or soft cloth.

For heavy-duty cleaning, use warm water, a degreaser and a plastic, stainless steel or Scotch-Brite pad.

Always rinse thoroughly. Always rub gently in the direction of the steel grain.

Preserving and Restoring

Special stainless steel polishing cleaners can preserve and restore the protective film.

Preserve the life of stainless steel with a regular application of a high quality stainless steel polishing cleaner as a final step to daily cleaning.

If signs of breakdown appear, restore the stainless steel surface. First, thoroughly clean, rinse and dry the surface. Then, on a daily basis, apply a high-quality stainless steel polish according to manufacturer's instructions.

Heat Tint

Darkened areas, called heat tint, may appear on stainless steel exposed to excessive heat, which causes the protective film to thicken. It is unsightly but is not a sign of permanent damage.

To remove heat tint, follow the routine cleaning procedure. Stubborn heat tint will require heavy-duty cleaning.

To reduce heat tint, limit the exposure of equipment to excessive heat.

TROUBLESHOOTING

There are no user serviceable parts on the Duke Product Holding Cabinet. If a malfunction occurs, ensure unit is plugged in then check all switches and circuit breakers. If the malfunction still exists, contact your Duke Manufacturing Company authorized service agent or call 1-800-735-3853.

ELECTRONIC CONTROL FAULT INDICATIONS

The keypad display provides an indication to alert the operator to failures in the heater circuit. The possible fault conditions are as follows:

1. **Over-Temperature Fault** - An over-temperature fault occurs when the control senses that the shelf temperature is higher than the specified factory preset temperature for thirty minutes. This occurs when the power is not removed from the heating element after the shelf has achieved the preset temperature. The auxiliary thermostat prevents the temperature from exceeding safe levels by regulating the temperature to a maximum of 250°F (121ºC). If this occurs, "HI" will appear on the keypad; the affected unit should not be used until the cause of the fault is corrected by a qualified service technician.
2. **Under-Temperature Fault** - An under-temperature fault occurs when the control senses that the shelf temperature is lower than the specified factory preset temperature for more than thirty minutes continuously. This occurs when heating element circuit opens or the RTD Feedback signal is faulty. If this occurs, "LO" will appear on the keypad and the affected unit should not be used until the cause of the fault is corrected by a qualified service technician.
3. **Sensor Fault** – If it any time during normal operation "SENS" is displayed on the keypad: discontinue operation and contact qualified service technician.

TEMPERATURE CHECK PROCEDURE

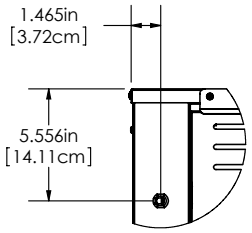
1. A digital temperature meter that has been calibrated must be used to get an accurate temperature reading. Use a thermocouple surface temperature probe to measure temperatures.
2. **Pans should be in wells during the pre-heat and temperature check.** Pre-heat the warmer for 30 minutes before taking 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 in the geometric center. The first cavity is the one closest to the control panel (see figure). Make sure the probe is making good contact with the surface while taking readings.
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 ± 5ºF (± 3ºC) from the set point.

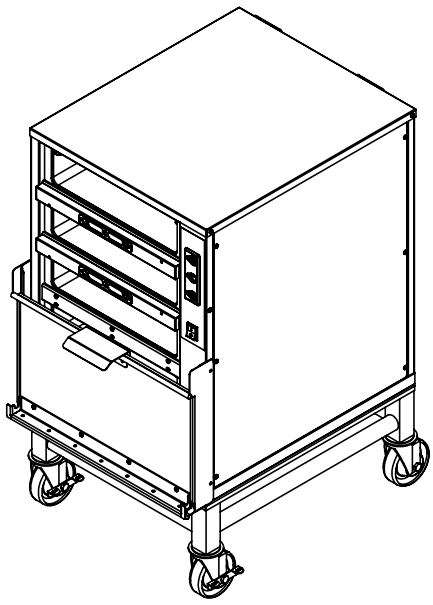
SERVICE HOT-LINE

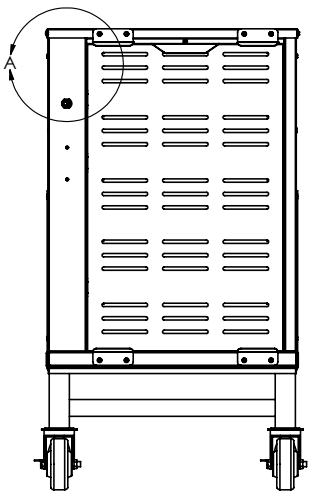
Check the display for fault messages. Perform the Temperature Check Procedure in this manual. Make note of the findings. Please, have this data handy before calling the Duke troubleshooting Hot Line listed above. For optimum support, please be near the suspect units with a cordless phone, if available, when calling our Technicians.

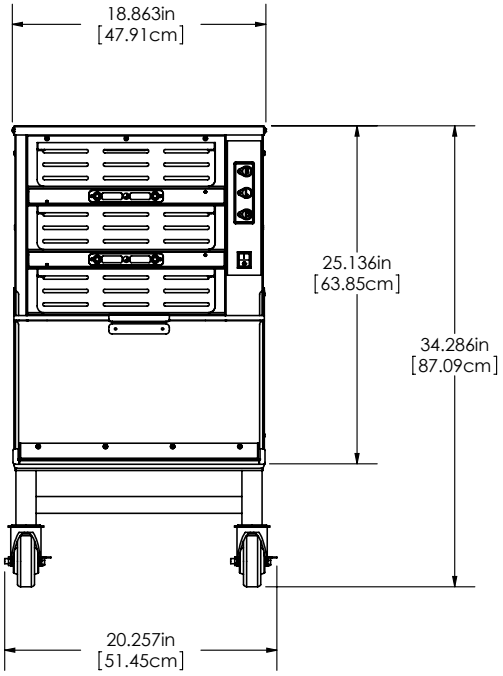
SPECIFICATIONS
MUHC-51

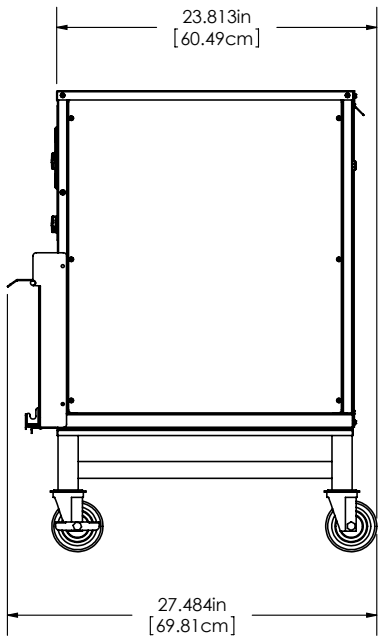
Unit Weight:	175 lbs/80 kg	
Electrical:	MUHC-51-120	120 V ~, 16 A, 1800 W, 50/60 Hz
	MUHC-51-208	208 V ~, 9.8 A, 2000 W, 60 Hz
	MUHC-51-230	230 V ~, 7.8 A, 50/60 Hz, 1800 W

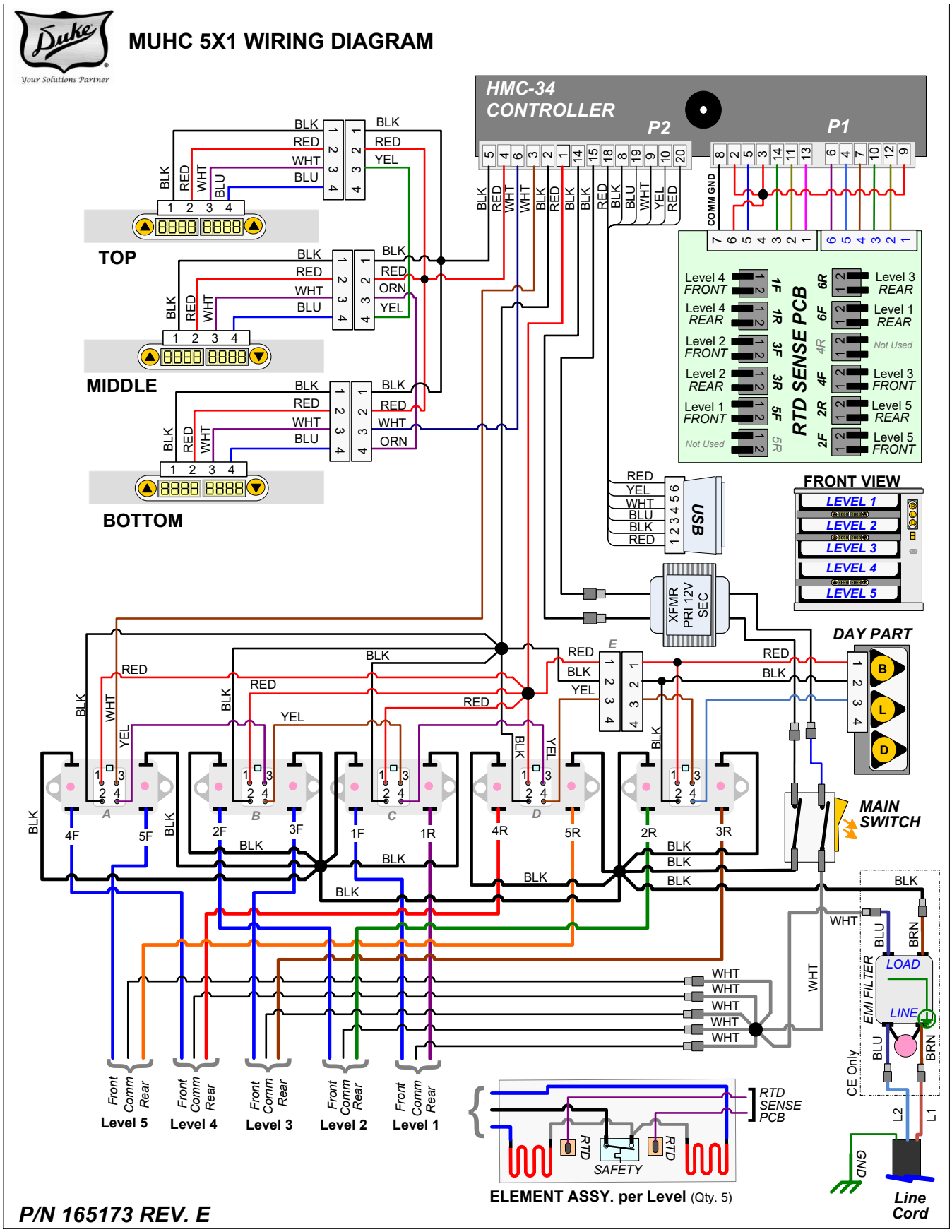






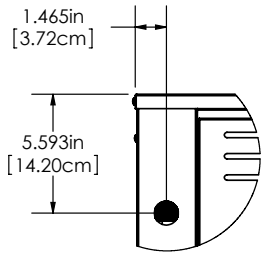


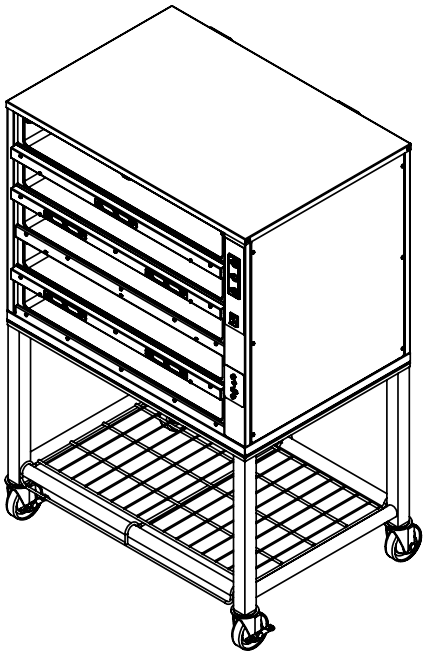


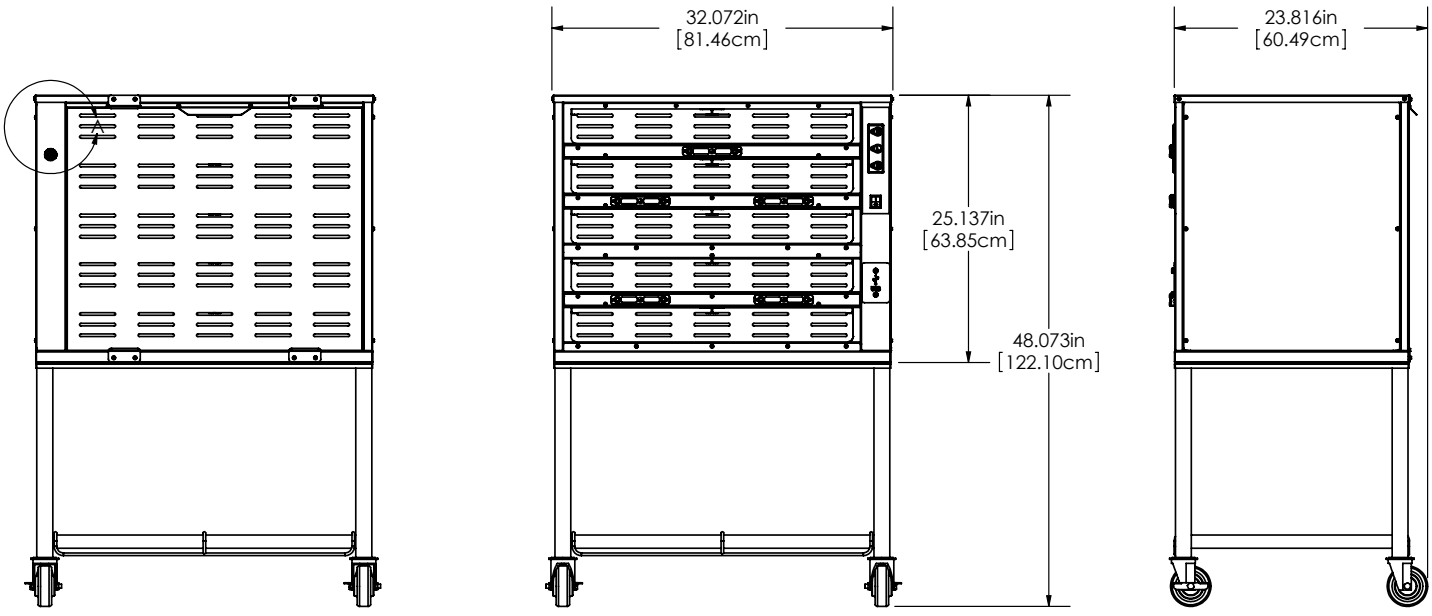

MUHC 5X1 WIRING DIAGRAM
Your Solutions Partner
HMC-34 CONTROLLER
P2
P1
COMM GND
TOP
MIDDLE
BOTTOM
RTD SENSE PCB
Level 4 FRONT
Level 4 REAR
Level 2 FRONT
Level 2 REAR
Level 1 FRONT
Not Used
Level 3 REAR
Level 1 REAR
Not Used
Level 3 FRONT
Level 5 REAR
Level 5 FRONT
USB
FRONT VIEW
LEVEL 1
LEVEL 2
LEVEL 3
LEVEL 4
LEVEL 5
XFMR PRI 12V SEC
DAY PART
MAIN SWITCH
EMI FILTER
LOAD
LINE
CE Only
Front Comm Rear
Level 5
Level 4
Level 3
Level 2
Level 1
RTD SENSE PCB
RTD
SAFETY
ELEMENT ASSY. per Level (Qty. 5)
GND
Line Cord
P/N 165173 REV. E

MUHC-52

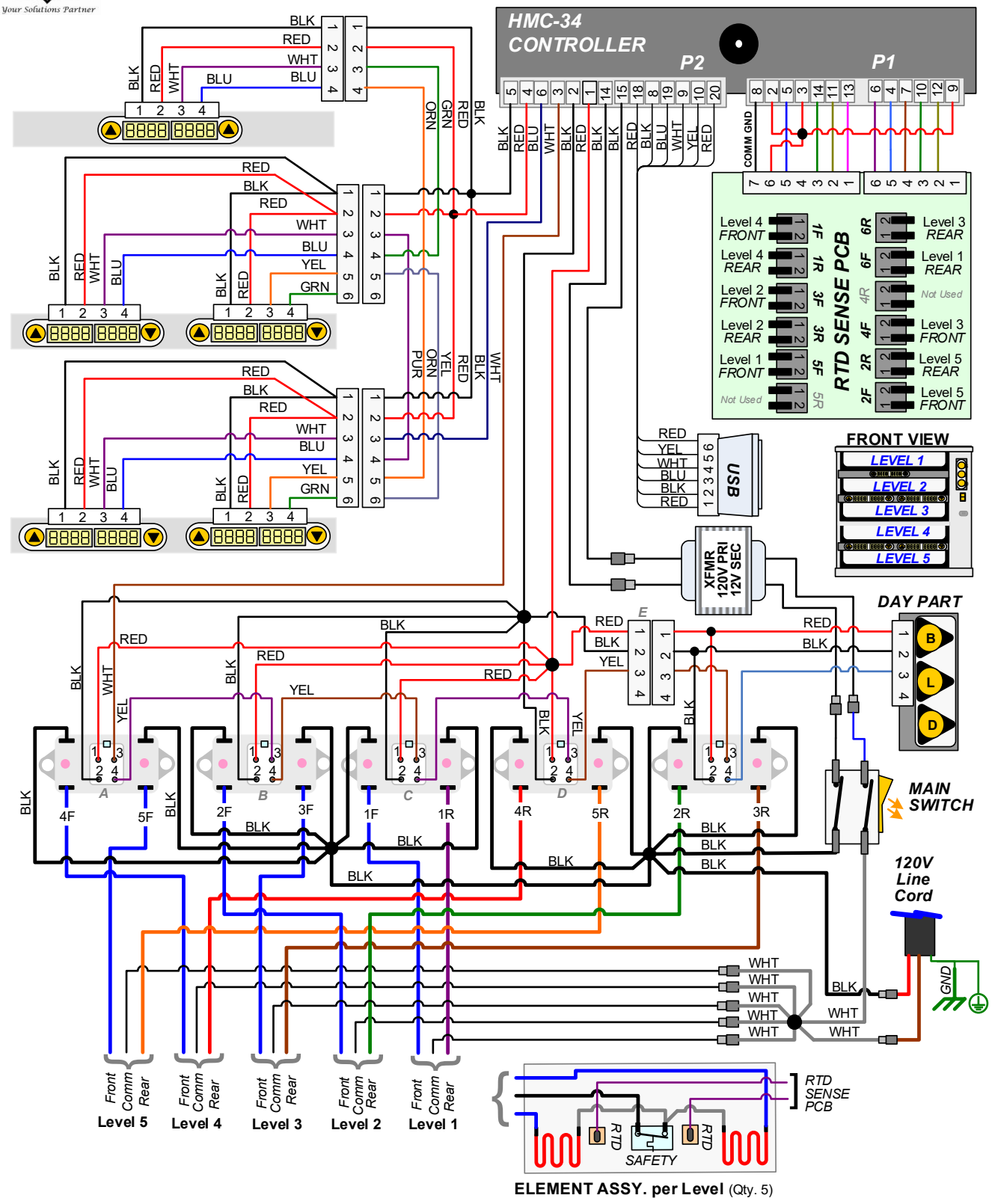
Unit Weight:	330 lbs/150 kg	
Electrical:	MUHC-52-120	120 V ~, 24 A, 2880 W, 50/60 Hz
	MUHC-52-208	208 V~, 13.5 A, 2800 W, 50/60 Hz
	MUHC-52-230	230 V~, 12.2 A, 2800 W, 50/60 Hz







MUHC 5X2 WIRING DIAGRAM

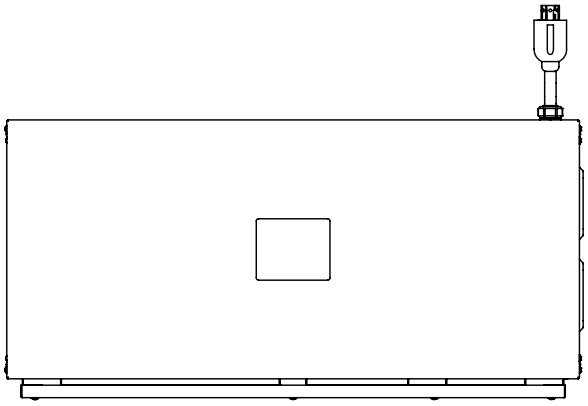


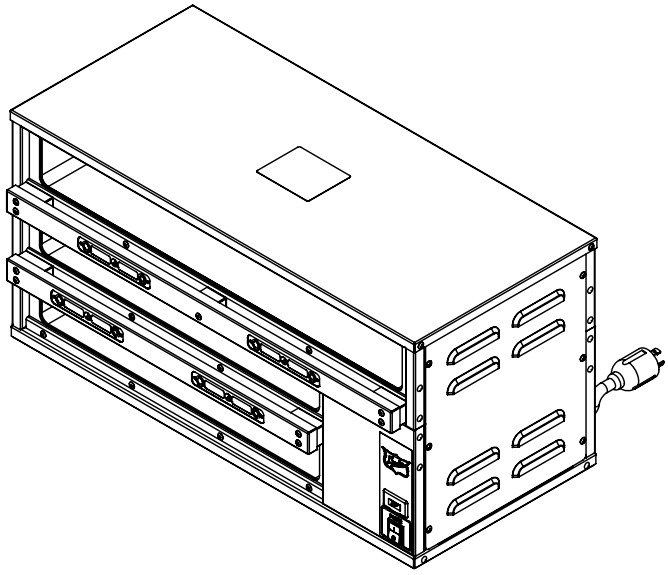
P/N 165273 REV. B

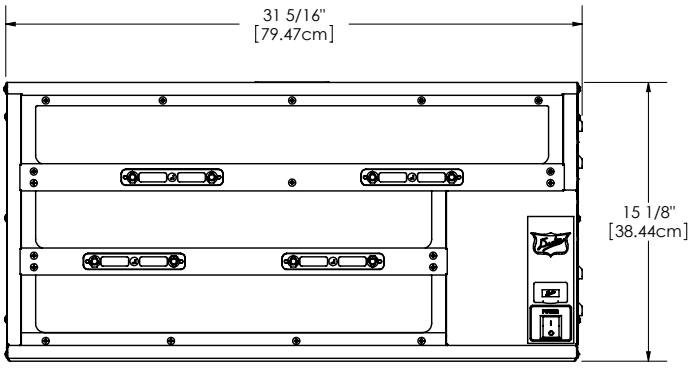
MUHC-34SM/CH

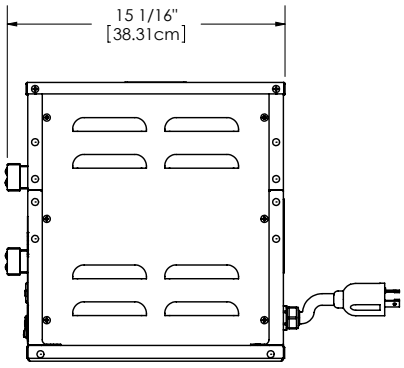
Unit Weight:	135 lbs/62 kg	
Electrical:	MUHC-34SM-208	208 V ~, 13 A, 2700 W, 50/60 Hz
	MUHC-34CH-208	208 V ~, 13 A, 2700 W, 50/60 Hz
	MUHC-34CH-230	230 V ~, 11.3 A, 2700 W, 50/60 Hz

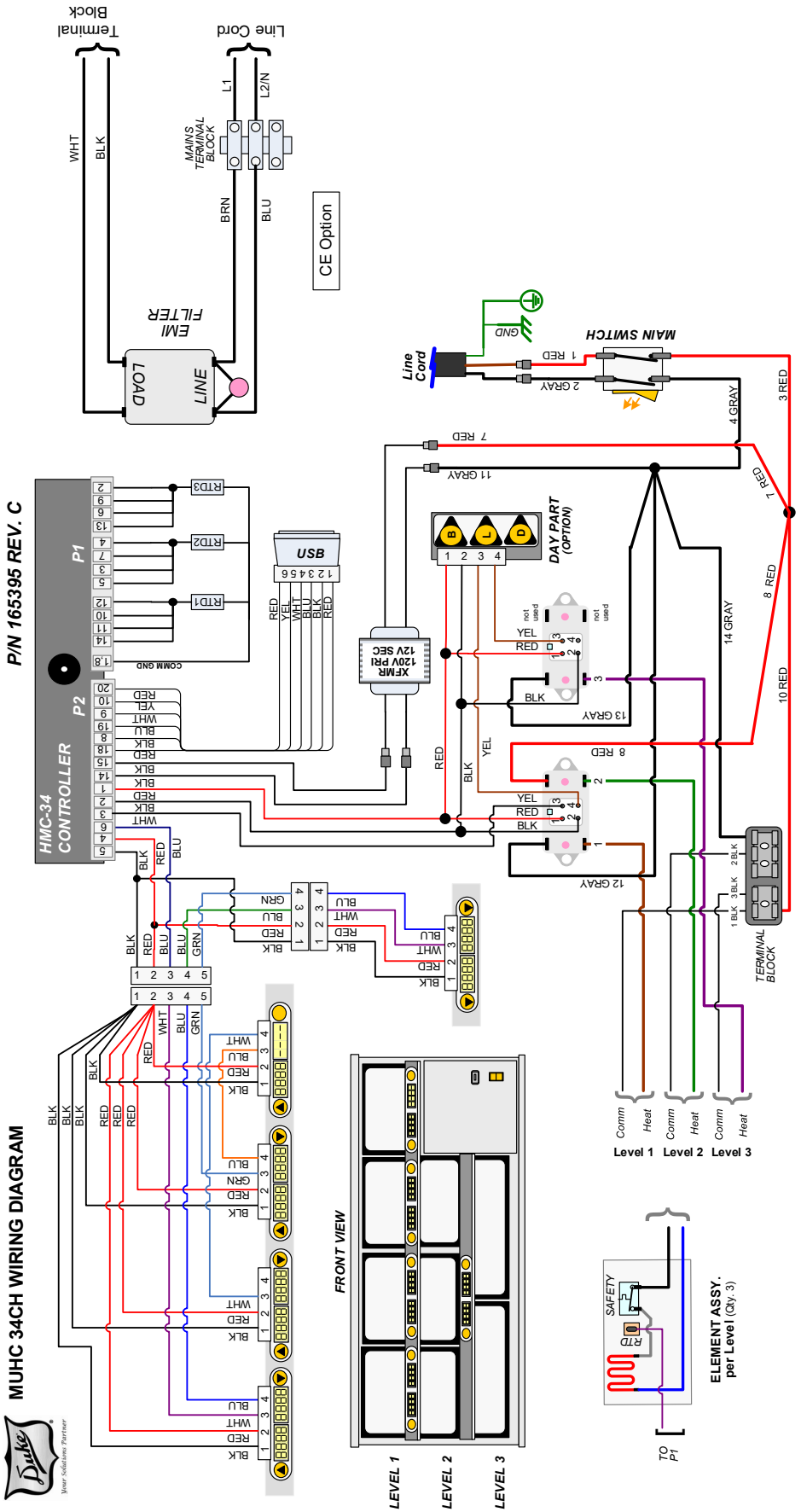
MUHC-34SM





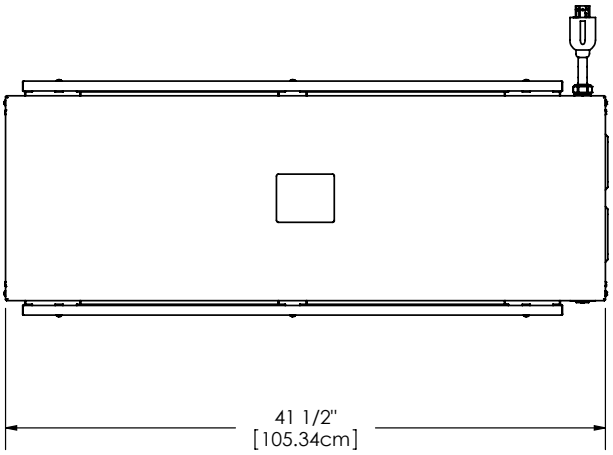


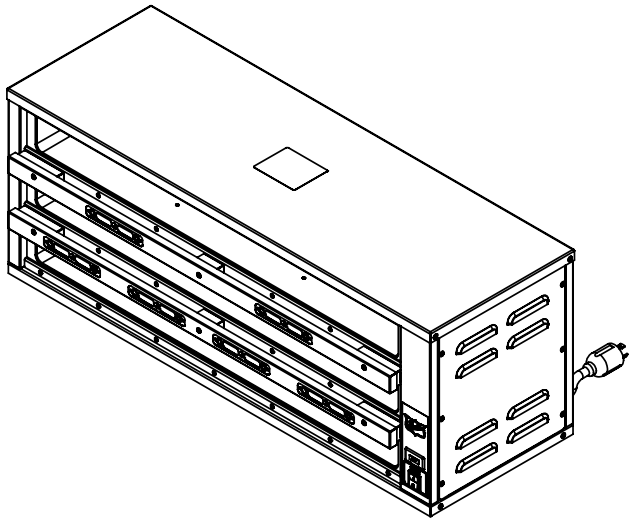


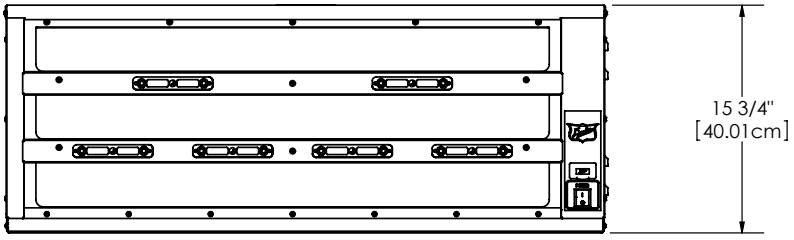

MUHC 34CH WIRING DIAGRAM
P/N 165395 REV. C
HMC-34 CONTROLLER
P1
P2
Terminal Block
Line Cord
WHT
BLK
L1
L2/N
MAINS TERMINAL BLOCK
BRN
BLU
CE Option
EMI FILTER
LOAD
LINE
GND
Line Cord
MAIN SWITCH
1 RED
2 GRAY
3 RED
4 GRAY
7 RED
11 GRAY
1 RED
8 RED
10 RED
14 GRAY
13 GRAY
12 GRAY
8 RED
RTD1
RTD2
RTD3
COMM GND
USB
XFMR 120V PRI 12V SEC
DAY PART (OPTION)
TERMINAL BLOCK
Comm
Heat
Level 1
Level 2
Level 3
FRONT VIEW
LEVEL 1
LEVEL 2
LEVEL 3
SAFETY
ELEMENT ASSY. per Level (Qty. 3)
TO P1

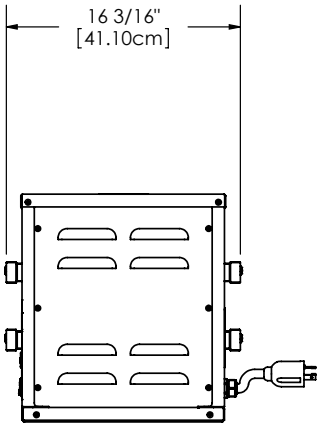
MUHC-34

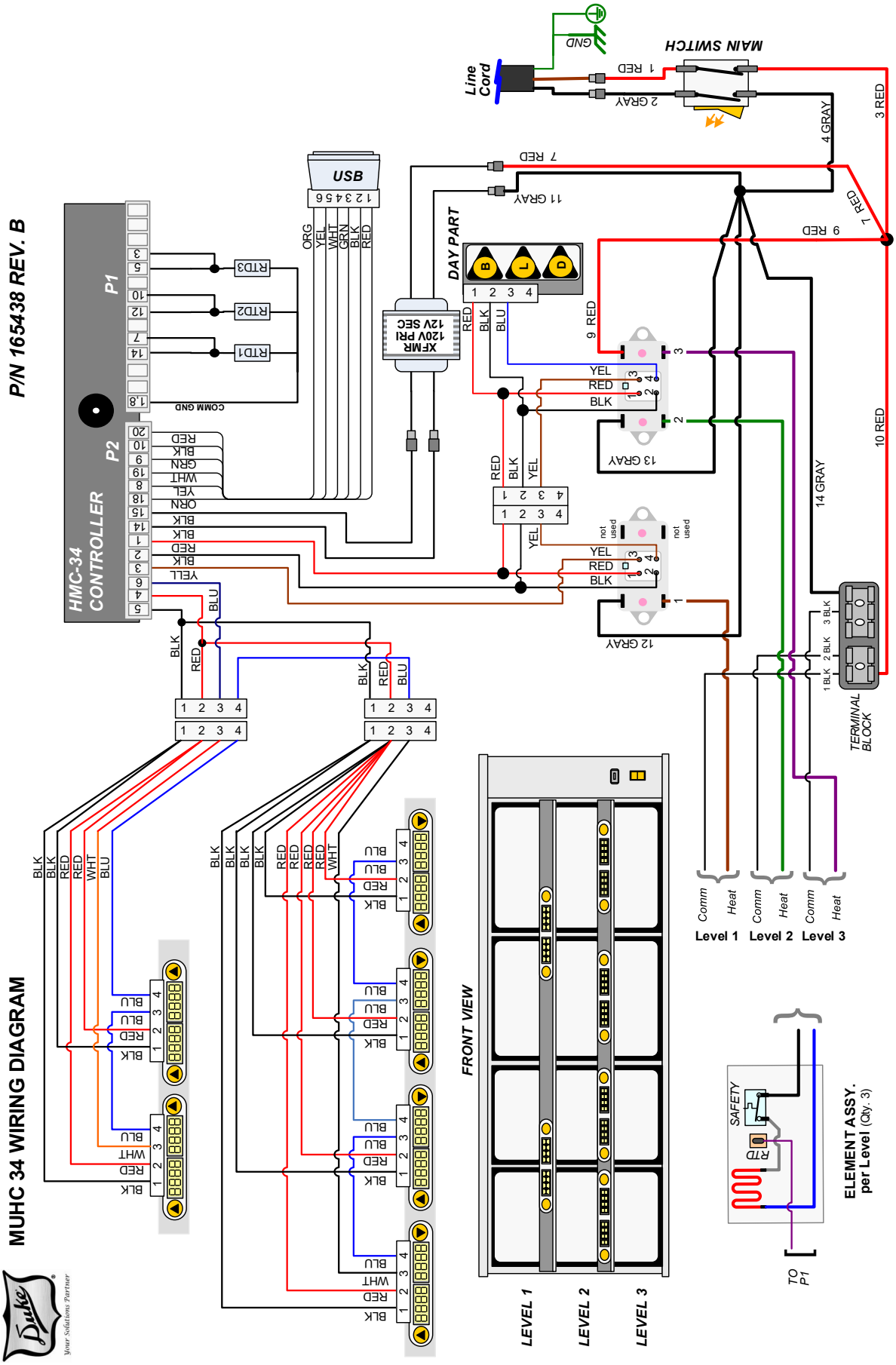
Unit Weight:	152 lbs/69 kg	
Electrical:	MUHC-34-208	208 V ~, 16 A, 3600 W, 50/60 Hz
	MUHC-34-230	230V~, 16 A, 3600 W, 50/60 Hz

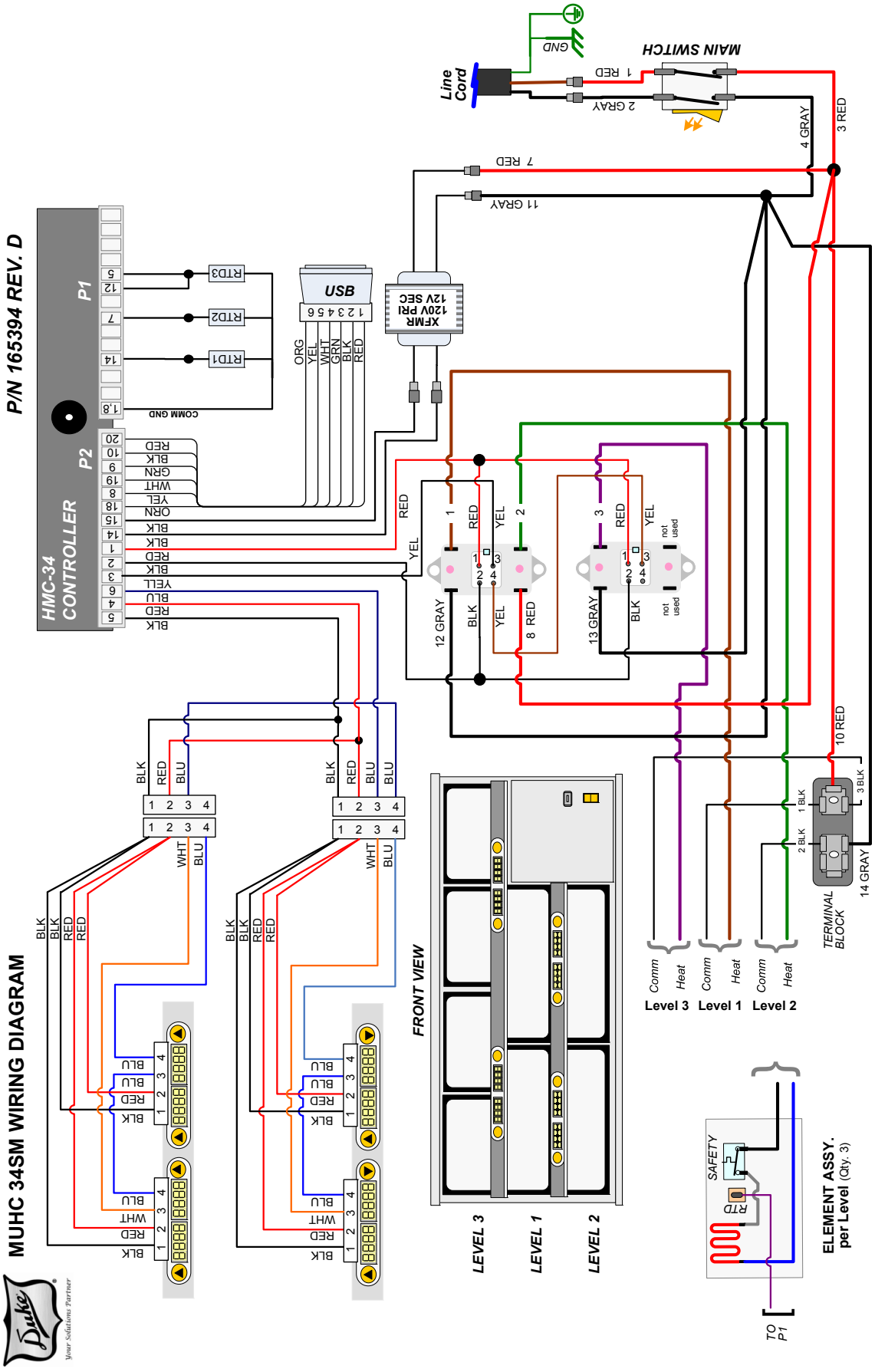









MUHC 34 WIRING DIAGRAM
P/N 165438 REV. B
HMC-34 CONTROLLER
P1
P2
MAIN SWITCH
Line Cord
GND
USB
DAY PART
XFMR 120V PRI 12V SEC
TERMINAL BLOCK
FRONT VIEW
LEVEL 1
LEVEL 2
LEVEL 3
Level 1
Level 2
Level 3
Comm
Heat
SAFETY
ELEMENT ASSY. per Level (Qty. 3)
TO P1


MUHC 34SM WIRING DIAGRAM
P/N 165394 REV. D
HMC-34 CONTROLLER
P1
P2
MAIN SWITCH
Line Cord
GND
1 RED
2 GRAY
4 GRAY
3 RED
7 RED
11 GRAY
XFMR
120V PRI
12V SEC
USB
RTD1
RTD2
RTD3
COMM GND
ORG
YEL
WHT
GRN
BLK
RED
12 GRAY
13 GRAY
8 RED
not used
10 RED
14 GRAY
TERMINAL BLOCK
Comm
Heat
Level 3
Level 1
Level 2
FRONT VIEW
LEVEL 3
LEVEL 1
LEVEL 2
SAFETY
RTD
TO P1
ELEMENT ASSY. per Level (Qty. 3)

NOTES:

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