



XD-9007A
EL-SWB1-HB
04/09/2012

Simple. Smart.



XLT Electric Oven & AVI Hood Parts & Service Manual



CAUTION

This appliance is for professional use by qualified personnel. This appliance must be installed by qualified persons in accordance with the regulations in force. This appliance must be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of substances harmful to health in the room in which it is installed. This appliance needs an unobstructed flow of fresh air for satisfactory operation & must be installed in a suitably ventilated room in accordance with current regulations. This appliance should be serviced by qualified personnel at least every 12 months or sooner if heavy use is expected.

Electronic copies of this manual, Rough-In Specifications, Installation & Operation Manual, Architectural Drawings, & a list of International Authorized Distributors are available at: www.xltovens.com

For use with the following XLT Electric Oven Versions:

Standard (S) B1
World (W) B1

For use with the following AVI Electric Hood Versions:

Standard (S) B
World (W) B



XLT Ovens
PO Box 9090
Wichita, Kansas 67277

US: 888-443-2751 FAX: 316-943-2769 INTL: 316-943-2751 WEB: www.xltovens.com

**SAFETY DEPENDS ON YOU****WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury, or death. Read the installation, operating and maintenance instructions thoroughly before installing, using, or servicing this equipment.

**WARNING****FOR YOUR SAFETY**

Do not store or use gasoline or other flammable liquids or vapors in the vicinity of this or any other appliance.

- Do not restrict the flow of ventilation air to the unit. Provide adequate clearance for operating, cleaning, and maintaining the unit when in the installed position.
- Keep the area free and clear of combustible material. DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.
- Ovens are certified for installation on combustible floors.
- Electrical schematics are located inside the control box of the oven and in this manual. Disconnect input power to the unit before performing any maintenance.
- This unit requires a ventilation hood. The installation must conform to local codes.
- This unit must be operated by the same voltage, phase, & frequency of electrical power as designated on the nameplate label located on the side of the unit.
- Minimum clearances must be maintained from combustible & non-combustible construction materials.
- Follow all local codes when installing this unit.
- Follow all local codes to electrically ground the unit.
- Appliance is not to be cleaned with high pressure water.
- XLT ovens are certified for use in stacks of up to three (3) units of XLT products. Integration of other manufacturer's products into an oven stack is not recommended, & will void any warranties. XLT Ovens assumes no liability for mixed product applications.
- Failure to call XLT Customer Service at 1-888-443-2751 prior to contacting a repair company voids any & all warranties.
- PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE.

XLT Ovens has spent millions of dollars designing and testing our products as well as developing Parts & Service Manuals. These manuals are the most complete and easiest to understand in the industry. However, they are worthless if they are not followed.

We have witnessed store operators and building owners lose many thousands of dollars in lost revenue due to incorrect installations. We highly recommend you follow all instructions given in this manual as well as follow best practices in plumbing, electrical, and HVAC building codes.

Definitions & Symbols

A safety instruction (message) includes a “Safety Alert Symbol” & a signal word or phrase such as **WARNING** or **CAUTION**. Each signal word has the following meaning:



**HIGH
VOLTAGE**

This symbol indicates high voltage. It calls your attention to items or operations that could be dangerous to you & other persons operating this equipment. Read the message & follow the instructions carefully.



WARNING

Indicates a potentially hazardous situation that, if not avoided, can result in serious injury or death.



CAUTION

Indicates a potentially hazardous situation, that if not avoided, can result in minor to moderate injury or serious damage to the product. The situation described in the CAUTION may, if not avoided, lead to serious results. Important safety measures are described in CAUTION (as well as WARNING), so be sure to observe them.



NOTE

Notes indicates an area or subject of special merit, emphasizing either the product's capability or common errors in operation or maintenance.



TIP

Tips give a special instruction that can save time or provide other benefits while installing or using the product. The tip calls attention to an idea that may not be obvious to first-time users of the product.

XLT warrants gas ovens manufactured after April 1, 2009 utilizing quietFIRE™ burners and all electric ovens manufactured after April 1, 2011 to be free from any defect in material and workmanship under normal use for five (5) years from the date of original purchase by the end user, and further warrants main fan blades, conveyor shafts, and conveyor bearings for ten (10) years. XLT further warrants all ovens to be free from rust for ten (10) years from the date the equipment is originally purchased. XLT warrants AVI hoods to be free from any defect in material and workmanship under normal use for two (2) years from the date of original purchase by the end user. In the event of a part failure, XLT will furnish a replacement part and pay for all labor associated with the replacement of the part if, upon inspection, XLT determines that the part is defective. This warranty is extended to the original end user purchaser and is not transferable without prior written consent of XLT. Damages are limited to the original purchase price.

DUTIES OF THE OWNER:

- The owner must inspect the equipment and crates at time of receipt. Damage during shipment is to be immediately reported to the carrier and also to XLT.
- The equipment must be installed and operated in accordance with the written instructions furnished with the unit.
- This warranty shall not excuse the owner from properly maintaining the equipment in accordance with the written instructions furnished with the unit.
- A copy of the "Initial Start-Up Checklist" must be filled out and returned to XLT Ovens and the Authorized Distributor when the unit is initially installed, and/or when the unit is removed and installed in another location.
- The gas, electric, and HVAC utilities must be connected to the oven and installed by locally licensed contractors.
- Failure to contact XLT Ovens prior to contacting a repair company for warranty work voids any and all warranties.

WHAT IS NOT COVERED:

The following items are not covered by this warranty:

- Freight damage
- Any part that becomes defective because of utility services (power surges, high or low voltages, high or low gas pressure or volume, contaminated fuel, or improper utility connections)
- Conveyor belts
- Filters
- Exhaust Fans
- Light Bulbs
- Normal maintenance or adjustments
- This warranty shall not apply if the equipment or any part is damaged as a result of accident, casualty, alteration, misuse, abuse, improper cleaning, improper installation, improper operation, natural disasters, or man-made disasters.

CLAIMS HANDLED AS FOLLOWS:

Should any such defect be discovered, XLT must be notified. Upon notification, XLT will arrange for necessary repairs to be made by an authorized service agent. Denial of services upon the arrival of an authorized service agent will release XLT of any and all warranty obligations.

XLT warrants gas ovens manufactured after January 1, 2011 utilizing quietFIRE™ burners and all electric ovens manufactured after April 1, 2011 to be free from any defect in material and workmanship under normal use for two (2) years from the date of original purchase by the end user. XLT warrants AVI hoods to be free from any defect in material and workmanship under normal use for one (1) year from the date of original purchase by the end user. In the event of a part failure, XLT will furnish a replacement part to the Authorized Dealer if, upon inspection, XLT determines that the part is defective. The Authorized Dealer will pay for all labor associated with the replacement of the part. This warranty is extended to the original end user purchaser and is not transferable without prior written consent of XLT. Damages are limited to the original purchase price.

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- The owner must inspect the equipment and crates at time of receipt. Damage during shipment is to be immediately reported to the carrier and also to XLT.
- The equipment must be installed and operated in accordance with the written instructions furnished with the unit.
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- The gas, electric, and HVAC utilities must be connected to the oven and installed by locally licensed contractors.
- Failure to contact the Authorized Dealer prior to contacting a repair company for warranty work voids any and all warranties.

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- Any part that becomes defective because of utility services (power surges, high or low voltages, high or low gas pressure or volume, contaminated fuel, or improper utility connections)
- Conveyor belts
- Filters
- Exhaust Fans
- Light Bulbs
- Normal maintenance or adjustments
- This warranty shall not apply if the equipment or any part is damaged as a result of accident, casualty, alteration, misuse, abuse, improper cleaning, improper installation, improper operation, natural disasters, or man-made disasters.

CLAIMS HANDLED AS FOLLOWS:

Should any such defect be discovered, the Authorized Dealer must be notified. Upon notification, the Authorized Dealer will arrange for necessary repairs to be made by an authorized service agent. The Authorized Dealer will notify XLT Ovens of all discovered defects.

This manual, which contains an illustrated parts breakdown, has been prepared as an aid in understanding how the unit operates, how to diagnose problems, and order parts for the equipment. All of the parts, listed in the parts breakdown, are manufactured with the same precision as the original equipment.

XLT parts and service providers are available worldwide. There are authorized service providers located in the principle cities of the United States. There are also authorized Distributors located throughout the world.

The Theory of Operation section describes how the unit operates. An understanding of normal operation will greatly aid diagnosis and troubleshooting. The Troubleshooting section asks simple yes or no questions. The next question or statement entirely depends upon the previous answer. It will lead to the solution of a problem in the most efficient way. The illustrated parts section identifies the various sub-assemblies and detailed parts which make up the equipment, as well as the part number. An explanation of how to order parts is included.

This manual is designed to supplement the Installation & Operation Manual provided with the unit when new. Please refer to it for descriptions, dimensions, weights, electrical requirements, maintenance schedules, and certifications.

XLT Ovens wants you to be totally satisfied with every aspect of owning & using your oven & hood. Your feedback, both positive & negative, is very important to us as it helps us understand how to improve our products & our company. Our goal is to provide you with equipment that we can be proud to build & you can be proud to own.

To receive technical support for the oven or hood you purchased, XLT has qualified customer service personnel that can provide assistance on any type of XLT oven or hood equipment problem you may experience. Customer Service is available 24/7/365 at 888-443-2751 or visit www.xltovens.com.

**WARNING**

Repairs of all electric appliances & ventilation exhaust hoods should only be performed by a qualified professional who has read & understands these instructions & is familiar with proper safety precautions. Read this manual thoroughly before installing or servicing this equipment.

Save this Manual

This document is the property of the owner of this equipment.

XLT Ovens reserves the right to make changes in design & specifications, and/or make additions to or improvements to its product without imposing any obligations upon itself to install them in products previously manufactured.

All Right Hand & Left Hand designations in this manual are from the point of view as if standing directly in front of the glass sandwich door.

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For maintenance procedures, please refer to the XLT Installation & Operation Manual.

Revision History Table		
Revision	Comments	Date
A	New Release	04/09/2012

When the Main Switch (S1) is turned on;

1. The Oven Fan Motor (M1) located in the Back Wall will run.
2. The Fans (M3) located on the Control Panel will run.
3. The Temperature Control (TC) should display both the actual and set-point temperatures.
4. The Conveyor Control (CC) should display the belt time.
5. The conveyor belt should move.

The first part of the Theory of Operation explains how electrical power is delivered to the oven and initial sequences when the main operator switch is turned on. The remainder of the Theory of Operation section explains the function of components in alphabetical order. These components are also listed on the schematic.

- Line voltage for Standard Ovens is assumed to be 208/240/480 VAC, 3 Φ , 60 Hz.
- Line voltage for World Ovens is assumed to be 380 VAC, 3 Φ , 50 Hz.

Power originates at the electrical connection on the wall. Line voltage is then carried into the oven through the power cord to the Power Block (PB). A wire connects Line 2 to the Terminal Strip (TS), which serves as a “neutral” for the single phase components. Several jumpers are used to bridge along the TS to make connection points for multiple “neutral” lines from all single phase components inside the Control Box and the Main Fan Motor (M1). A wire connects line 1 to Terminal T11 on Relay 1 (R1) and acts as the “hot” leg for all of the single phase components. From there, a wire connects single phase power through the normally closed High Limit Switch (S3), then through Circuit Breaker 1 (CB1), then to the Main Switch (S1). Three phase power is applied to Contactors 1 & 2 (C1 & C2) through Circuit Breakers 5 & 6 (CB5 & CB6) and the PB. Unless the power supply on the wall has no power, the single phase and three phase circuits just described have power at all times.

When S1 is turned on, line voltage will be carried thru the switch simultaneously to three locations via two parallel circuits:

- Terminal T6 of R1
- Centrifugal Switch (S2) located in M1

And:

- Power Supply (PS)

C1 & C2 - A contactor is an electrically controlled switch used for switching a power circuit. A contactor is controlled by a control circuit that has a much lower power level than the switched circuit. They consist of a small coil and a set of three SPST contacts. When S2 & S3 are closed, line voltage is applied to the coil, which closes the contacts. Then power is allowed to flow to the SSR's. If the temperature at S3 exceeds 600° F, or if M1 does not rotate, then voltage is interrupted to the coil, and will open the contactors.

CAP - The Capacitor is physically mounted inside the Control Box but wired to the externally mounted Main Motor (M1). The Main Motor is a permanent split capacitor (PSC) design, which is a motor in which the starting capacitor and the auxiliary winding remain in the circuit for both starting and running.

CB - Circuit Breakers are used to protect electrical components. The current value is printed on the front of all breakers. If a CB is tripped, eliminate the cause and press the front to reset.

CC - The Conveyor Control is supplied 24 VDC by the Power Supply (PS) via a Circuit Breaker (CB3 & CB4, optional) to Terminals #4 & 5. The belt time is displayed, and is user-adjusted by pressing and holding the up or down arrow button switches. See the Specification Sheet for minimum and maximum belt times. The motor speed is calculated based on the time that is entered. This time is translated to a RPM on the motor shaft depending on the size of the oven, the diameter of the sprocket, and the gear ratio of the gearbox. Once the motor is running, hall sensor inputs are fed back into the driver to determine the speed the motor is currently running at. This input goes into a PID algorithm to adjust the PWM output to control the speed to match the target speed that was calculated first. This PWM is adjusting the average voltage that the motor phases are seeing. As the average voltage goes up, the motor will speed up. As the average voltage drops, the motor speed will also drop. The maximum speed is based on a continuous 18-24V being supplied to the motor. The phasing of the controller is dependent on the hall sensor signals that are being returned. The controller reads the hall sensor position and from there knows which phase of the motor receives the 18-24V signal, which phase of the motor is the return and which phase of the motor is left open. As the motor spins, the hall sensors change, which dictate which phases are energized.

H1-6 - The Heating Elements convert electricity into heat through the process of joule heating. Electric current through the element encounters resistance, resulting in heating the element. The resistance values of the four (4) different part numbers used are:

- XP-5201-208-4.5 4500 Watt 9.61 Ohms
- XP-5201-240-4.5 4500 Watt 12.80 Ohms
- XP-5202-208-5.3 5300 Watt 8.16 Ohms
- XP-5202-240-5.3 5300 Watt 10.87 Ohms

Please refer to the Parts section for the proper application.

M1 – The Main Motor is a Permanent Split Capacitor (PSC), single phase, capacitor run motor and

has an internal centrifugal switch (S2). The motor is dual voltage and reversible. The voltage to power the motor comes from the Cool Down Timer (R1), and the motor will continue to operate for approximately 30 minutes after the main switch is turned off. There are no user serviceable parts in the motor, and the bearings are permanently lubricated.

M2 - The conveyor motor (M2) is a brushless 24 VDC gear motor. The motor receives current from the Conveyor Control (CC) through three (3) wires; 1) A black or “W” phase, 2) a white or “V” phase, and 3) a red or “U” phase. They carry between 18 to 24 VDC. Each wire is energized by the Conveyor Control (CC) in sequence to provide power to the individual stator coils which, in turn, provide motor rotation.

To determine the rotors position and send this position to the controller, three (3) Hall Effect switches are utilized. They read the rotational information from a disc mounted on the rotor assembly. This information is transmitted to the CC by three (3) wires; 1) an orange “U” phase pole signal output, 2) a green “V” phase pole signal output, and 3) a green/white “W” phase pole signal output. These are located in a plug that inserts into the CC. There are two (2) additional wires in this plug; 1) a purple wire which is supply voltage for the pole sensor, and 2) a gray wire that is ground.

The CC, using an internal logic circuit, energizes the stator coils to provide proper rotation and sets the energization (phase) timing to obtain the desired belt speed set on the controller. The motor drives an integral gear box that reduces the motor output speed to give the correct travel time to the conveyor belt. The integral gear box is sealed and permanently lubricated with grease. The ratio is 1/200.

M3 - These Motors have fan blades attached to them that provide cool, filtered air to the control box components for cooling.

PB - The Power Block is a connection point for multiple wires of different gauges.

PS - The Power Supply rectifies line voltage to 24 VDC, and supplies power to the Conveyor Control (CC). A 4 amp fuse is used to provide over current protection, which is mounted on the PS itself. There are no other fuses used anywhere else.

PU - The Pick-Up is physically mounted within the Conveyor Motor (M2) and utilizes hall effect technology integral to the M2 to monitor the rotation speed. The hall effect signal is transmitted to the CC, which converts it into linear travel speed of the conveyor.

R1 - R1 is a 30-minute off delay relay which functions as a cool down timer. Applying power to terminal T6 activates the relay, which sends a voltage signal out from terminal T9. When power is removed from T6, voltage continues from T9 for 30 minutes. T9 supplies voltage to the Main Fan Motor (M1) through a Circuit Breaker (CB2), and also supplies voltage to M3. M1 and M3 are the only components that will continue to operate for 30 minutes after S1 is turned off. The off delay

relay is a safety feature to allow the oven to cool down to room temperature, and to eliminate heat stress on the components of the oven.

S1 - The Main Switch is a SPST normally open switch, mounted on the front of the Control Box. Activating this switch applies voltage to Terminal T6 of the Cool-Down Timer (R1). When used with the optional AVI Hood System, a remote switch mounted in the front of the AVI Hood replaces it.

S2 - This Switch is a SPDT centrifugal switch physically mounted inside the Main Motor (M1). When M1 comes up to full speed, S2 closes and sends voltage to the Temperature Control (TC) and the Contactors (C1 & C2). It functions as a safety feature to prevent burner operation if the M1 fails to rotate.

S3 - This Switch is a SPDT thermal switch, located in the side panel of the oven, and it monitors the internal temperature of the bake chamber. It is normally closed, and will open when the temperature reaches and exceeds 600° F. If it opens, it will interrupt power to all of the single phase components. This event will initiate the 30 minute off-delay timer, which will result in the main fan operating for 30 minutes, then turning off.

SSR 1-4 - A Solid State Relay is an electronic switching device in which a small control signal from the Temperature Control (TC) controls a larger load current and voltage. It comprises a voltage sensor which responds to the TC, a solid state switching device which switches power to the Heating Elements (H1-6) either on or off, and does this without mechanical parts.

T/C - The thermocouple is a type K. It consists of two different conductors that produce a voltage proportional to a temperature difference between either end of the pair of conductors. The T/C is connected to terminals 9 & 10 of the Temperature Control (TC). The milli-volt signal is used to display the actual temperature.

TC - The Temperature Control (TC) has line voltage applied to terminal 10, and “neutral” voltage applied to terminal 9. There are two displays; one for actual temperature and one for set-point temperature. Actual temperature is determined by the Thermocouple (T/C), connected to terminals 2 & 3, with terminal 2 being the negative terminal and terminal 3 being the positive terminal. The user determines the set-point temperature by pressing and holding the up or down arrow button switches. The TC sends a 14-24 VDC signal to the Solid State Relay (SSR) depending upon the relationship between actual temperature and set-point temperature. If the actual temperature rises above maximum temperature, an internal switch contact opens thereby interrupting power.

When any one of, or all of, the Hood Operator Switches (S2, S3, & S4) are turned on;

1. The Exhaust Fan Motor (M1) located on the roof will run.
2. The Variable Frequency Drive (VFD) will display a set value. The values are preset from the factory and can be referenced in the I&O manual.
3. The ovens associated with the corresponding switches will turn on.

The first part of the Theory of Operation explains how electrical power is delivered to the hood and initial sequences when the main operator switch is turned on. The remainder of the Theory of Operation section explains the function of components in alphabetical order. These components are also listed on the schematic.

- Line voltage for Standard Hoods is assumed to be 208/240 VAC, 60 Hz. (1) Phase
- Line voltage for World & Australian Hoods is assumed to be 230 VAC, 50 Hz. (1) Phase

Power for the hood originates at building's electrical service panel. Two (2) circuits are required; 1) is a three phase circuit for VFD/Fan circuit, and 2) is a single phase circuit for lights and relays. The single phase circuit consist of a line and a neutral, and connects to the Terminal Strip (TS). A wire connects the TS to Switch 1 (S1-SPST-NO), which operates the lighting circuit, and also to Switch 5 (S5-SPST-NC), which is used to manually override the Variable Frequency Drive (VFD) in case of failure. The three phase circuit also connects to the TS, and wires connect the VFD through Relay 7 (R7-3PDT) and a Circuit Breaker (CB). The single phase and three phase circuits just described should have power at all times. The green run indicator directly above the programming indicator is illuminated when the controller is in the run mode. The controller is put in run mode by pressing the green run button.

Power for ovens are routed through the hood to Switches 2, 3, & 4 (S2, S3, S4, all DPDT-NO) via a Switch Relocation Cord (SRC). When XLT Ovens are installed with an AVI Hood, the SRC effectively eliminates the Main Switch located on the oven and transfers control to the DPDT switches on the hood.

When the contacts of S1 are closed, single phase voltage will be carried thru the switch to the light bulbs.

When the contacts of S2, S3, or S4 are closed, the 1st set of contacts perform the exact same function as S1 does on the oven. In addition, they allow current to flow through coils located in Relay 1, 2, or 3 (R1, R2, R3, all SPST NO) which closes the Relay contacts to provide a signal out to Make Up Air (MUA) dampers located in Roof Top Units (RTU).

The 2nd set of contacts will connect terminal P24 of the VFD to either terminal 1, 2, or 3, which will initiate operation of the VFD.

CB - Circuit Breakers are used to protect electrical components. If a CB is tripped, eliminate the cause and press the front to reset.

CS - The Current Sensor is a device that detects electrical current in a wire, and then generates a signal proportional to it. It drives an LED indicator lamp (L3) to indicate that the VFD is drawing current and operating. A minimum of 1.5 AAC is required.

L1 & L2 - These are standard incandescent light bulbs, and should illuminate when the contacts of S1 are closed.

L3 - This is a green LED indicator that is driven by the CS to indicate that the VFD is drawing current and operating.

M1 - The Exhaust Fan Motor is a 3-phase, direct drive motor. In normal operation, it is powered by the VFD through R6, and it's RPM will vary as the frequency from the VFD varies. In Manual Mode, it is powered with line voltage and frequency by R7 and R5, and will run full speed. There are no user serviceable parts in the motor, and the bearings are permanently lubricated.

PLUG 1, 2, & 3 - These are circular electrical plugs on one end of the Switch Relocation Cord (SRC). The Plugs connect to Receptacles 1, 2, & 3 on the bottom of the Hood Control Box. The other end of the SRC plugs into the oven wire harness, and eliminates the operator switch supplied in the oven. Conversely, when the operator switch on the hood is turned off, the corresponding oven is turned off as well.

R1, R2, & R3 - These are SPDT relays, which are electrically operated switches. They use an electromagnet to operate a switching mechanism. When the contacts of S2, S3, or S4 are closed, current flows through a coil in the relays, causing the contacts in the relay to close. This will complete a circuit in the Dampers in the Roof Top Units (RTU).

R5, R6, & R7 - These are 3PDT relays, which are electrically operated switches. They use an electromagnet to operate a switching mechanism. R7 is used all of the time, regardless of whether the unit is in normal operating mode or in manual mode. R5 & R6 are only used in manual mode.

REC 4, 5, & 6 - These are circular electrical receptacles mounted on the bottom of the Hood Control Box. They connect to the SRC and also to S2, S3, & S4. See PLUG 1, 2, & 3.

S1 - This SPST (NO) switch is located on the front of the hood and controls the lights.

S2, 3, & 4 - These DPST (NO) switches are located on the front of the hood and control the ovens, as well as initiating and sequencing the operation of the VFD and damper circuits.

Line voltage is continuously applied to pin 1 of REC 4, 5, & 6, which is connected by a wire to a contact in S2, 3, & 4. This is shown on the schematic as the lower RH connection point of S2, 3, & 4. When the switch contacts are closed, shown on the lower LH connection point on the schematic, power is applied to pin 2 of the receptacles, as well as terminal B of R1, 2, & 3. Wires also connect terminal B and pin 4 of the receptacles. In essence, S2, 3, & 4 replace the switches on the ovens, and also energize the coils of R1, 2, & 3, which closes the relay contacts and send a signal to dampers in RTU's.

The other set of contacts, shown as the upper set on the schematic, connect terminal 24 of the VFD and terminals 3, 2, & 1 respectively. The VFD generates it's own 24 VDC signal voltage, and the switches serve as inputs to the VFD. The VFD outputs user-selected frequencies depending upon the combination of switches that are closed.

S5 & S6 - These are keyed SPST switches that are used for manual mode operation in case of VFD failure. S5 is NO (OFF) and S6 is NO (OFF). When S5 is OFF, the key cannot be removed. It can only be removed when the switch is turned ON. The same key is used to operate S6, and can only be inserted or removed when S6 is OFF.

Incoming line voltage is applied to terminals 7, 8, & 9 on R7. In normal mode, the voltage is connected to terminals 1, 2, & 3, which feed the VFD. When the contacts of S5 are closed, in manual mode, the incoming line voltage is connected to terminals 4, 5, & 6, causing the voltage to be diverted away from the VFD and sent to terminals 7, 8, & 9 of R5. S5 is also connected to R6, and when the contacts of S5 are closed, the switch contacts of R6 change state, resulting in the complete isolation of the VFD on both the input and output sides.

At this point in time, there should be no voltage supplied to either the VFD or M1.

The key is then removed from S5 and inserted into S6. When the contacts of S6 are closed, the contacts of R5 change state and incoming power and frequency is applied to M1 via the TS.

TS - this is a terminal strip, which serves as a connection point for wires.

VFD - The Variable Frequency Drive (VFD) converts the AC supply voltage to DC and then converts the DC to a suitable three-phase frequency source for M1. Incoming power connects to terminals L1, L2, & L3. M1 connects to terminals U, V, & W through R6 & TS1. The VFD generates it's own 24 VDC control voltage on terminal P24. S2, S3, & S4 serve as user-controlled inputs and connect terminals 1, 2, & 3 to terminal P24. User inputs include a <RUN> and <STOP/RESET> button switch, as well as <UP> and <DOWN> arrow button switches. A complete manual can be found at www.xltovens.com.

Mechanical Function

If your oven does not function properly, please verify the following conditions:

1. Verify that the power cord to the oven is connected and/or plugged in if equipped with a plug and receptacle.
2. Check to see that the circuit breakers in the building electrical service panel have not been tripped or turned off.
3. Check all circuit breakers on the oven control panel to ensure they have not been tripped.
4. Ensure proper voltage, amperage, and wire size.

If your oven still does not function properly, XLT has qualified customer service personnel that can provide assistance on any type of XLT oven problem you may experience. Customer Service is available 24/7/365 at 888-443-2751, or visit www.xltovens.com. An interactive troubleshooting guide is available on the website.

Before troubleshooting the hood:

1. Make sure that the RUN lamp and POWER lamp are lit.
2. Check to see that the breaker in the service panel is not tripped.
3. Check to see that the breaker on the hood electrical box is not tripped.
4. Make sure the Switch Relocation Cords (SRC) are properly installed to the oven(s).
5. Check to see that the grease filters are clean & installed properly.
6. Check to see if the exhaust fan is rotating in the correct rotation. (applies to new installations)

In the occurrence that the VFD controller has an ERROR Code displaying. Follow these steps to clear them.

Error Codes:

- E01-E04 Inverter output was short circuited
- E05 motor overload is detected by electronic thermal function.
- E07 DC bus voltage exceeds a threshold
- E09 DC bus voltage is below a threshold
- E14 Ground fault detected between controller output and motor.

Error Code Reset:

Check VFD display for error code and record it.

Clear error by pressing the <Stop Reset> button.

Press the <Run> button to activate exhaust fan.

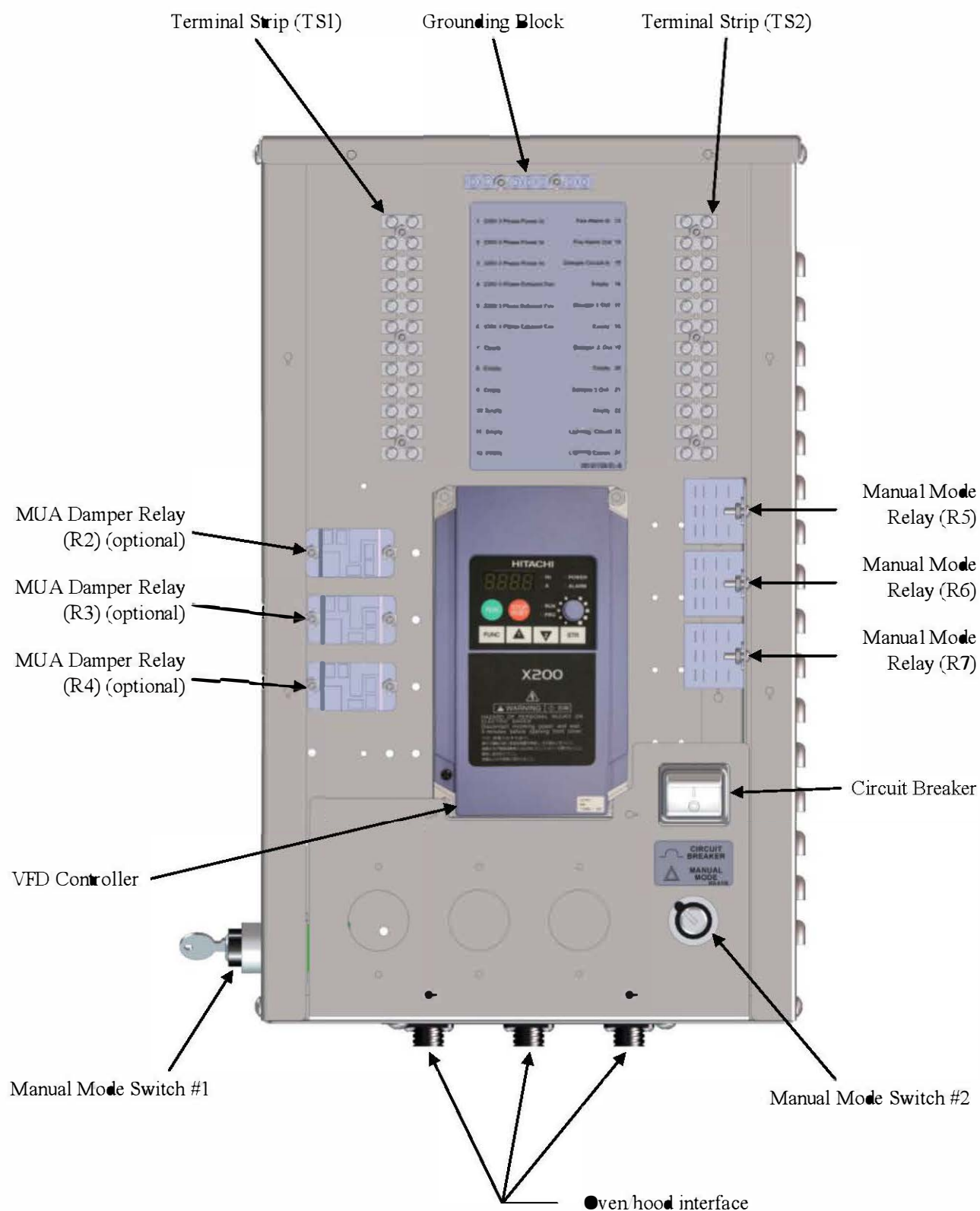
Normal operation resumes with no error codes.

If error codes return press the <Stop/Reset> key and call XLT service.

If the corrective actions listed above do not correct the problem, then XLT has qualified customer service personnel that can provide assistance on any type of XLT Oven or AVI Hood problem you may experience. Customer Service is available at 888-443-2751 24/7/365, or visit www.xltovens.com. The website offers an interactive troubleshooting guide that can further assist in diagnosing problems.

For repairs or maintenance of the fire suppression system and components, contact the local Ansul dealer or XLT for assistance.

VFD Control Box - Standard



VFD Control Box (Cover removed)

Conveyor Control Programming Procedure

Read the entire instruction before programming.

Configuration Key Functions

<L> = Behind the <L> in XLT is a hidden button. This is used along with the up and down button to access the programming mode. Use this after each step to advance to the next parameter when programming.

△ UP = Increases the setting of the selected parameter.

▽ Down = Decrease the setting of the selected parameter.

1. Enter Programming Mode/ Program the bake length

- Press the <L> button and both <UP> and <DOWN> button simultaneously to enter programming mode. (You will be in bake length programming mode)
- 0055 will appear on screen, this is already set from factory
- Press the <UP> button until the desired belt length is displayed for your application. Belt lengths will read as follows:

1832 = 0032

1855 = 0055

2440 = 0040

3240 = 0040

3255 = 0055

3270 = 0070

3855 = 0055

3870 = 0070

3. Program the Total Reduction Value

- Press the <UP> button until the desired settings is reached. All ovens = 300.

4. Set Speed Trimming Value

- Press the <DOWN> button until the display shows 0000.

5. Set Fast Bake Limit

- Press the <UP> button until the display shows 1:30.

6. Set Slow Bake Limit

- Press the <UP> button until the display shows 17:00.

7. Set Conveyor Motor Rotation

- Press the <UP> OR <DOWN> buttons until the display shows 1 for right-to-left direction, or 2 for left-to-right belt direction.

8. Save and Exit Programming Mode

- Press the <L> button two times to save and exit Programming Mode.

9. 1:30 run time will appear

- Press and hold the <UP> or <DOWN> buttons until desired run time appears.

Temperature Control Programming Procedure

Read the entire instruction before programming.

Configuration Key Functions

<FUNC> = The new setting of the selected parameter is stored and the display advances to the next parameter. This is required between each parameter.

△ = Increases the setting of the selected parameter.

▽ = Decrease the setting of the selected parameter.

1. ●pen V101 switch for Basic Configuration (Figure 1)
 - Turn main switch to the off position
 - Remove instrument from its case
 - ●pen Switch V101
 - Re-insert the instrument back in its case.
 - Turn main switch to the on position
2. Basic Configurations
 - Using the configuration keys scroll thru parameter codes changing them to match (Figure 2)
 - After P12 _ _ _ _ Will appear
3. Close V101 switch after Basic Configuration (Figure 1)
 - Remove instrument from its case
 - Close Switch V101
 - Re-insert the instrument back in its case.
 - Error 400 will appear press and hold the △ and ▽ to clear
 - 000 will appear
4. Advanced Configurations Procedure
 - Using the configuration keys scroll thru parameter codes Changing them to match (Figure 3)
 - ●n the first pass thru change nnn to 311 to unlock the advanced configuration
 - Scroll thru the parameter codes again and change the nnn to 5 this locks the advanced configuration
 - Scroll thru the parameter codes again and verify nnn is ●N

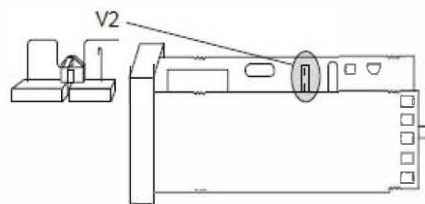


Figure 1

P1	2°C/10°F
P2	0
P3	315°C/600°F
P4	r
P5	1
P6	H.A.
P7	d
P8	OFF
P9	0
P10	100
P11	311
P12	7

Figure 2

SP	260°C/500°F
mn	311/5
AL	315°C/600°F
HSA	.1
Pb	4.0
ti	5.0
td	.00
1P	30
C	2
rL	204°C/400°F
rH	310°C/590°F
OLH	100
tOL	InF

Hitachi X200 Restoring Factory Defaults

Access program parameters by pressing the <FUNC> key one time and using the up and down arrow keys to navigate to the appropriate parameter press the <FUNC> key again to make adjustments to that parameter by using the up and down arrows. To store the new settings press the <STR> button one time.

B031 = 01

B084 = 01

After pressing the <STR> key Press and hold the <FUNC> down arrow key and <Stop/Reset> key all at the same time. Release the keys all at once and the country code should appear in the display (USA). Hitachi's factory settings are now restored.

A001 = 01

A003 – USA = 60 Hz. World = 50 Hz.

A082 = Supply voltage at location 200, 215, or 230 choose appropriate voltage.

A093 = 3000

A094 = 01

A096 = 10

B002 = 25

C001 = 02

C002 = 03

C003 = 04

C004 = 05

C014 = 00

F001 = See Figure 1

H004 = 4

B031 = 03



Put controller into monitor mode by pressing the <FUNC> and holding until d001 appears on the display release and then press the <FUNC> one time. The display should show 0.0.

Put the controller in Run mode by pressing the <RUN> key one time. The Run indicator light located next to the speed control knob should illuminate.

Test run the motor by turning on one of the oven/hood switches located on the face of the hood.

Complete VFD manual available at www.xltovens.com

	VFD Controller Settings					
	Switches On			1832, 1855 & 2440	3240, 3255 & 3270	3855 & 3870
	Top	Middle	Bottom			
Single	X			20 Hz	25 Hz	30Hz
Double	X			20 Hz	25 Hz	30Hz
			X	35 Hz	40 Hz	45 Hz
	X		X	35 Hz	40 Hz	45 Hz
Triple	X			20 Hz	25 Hz	30Hz
		X		30 Hz	35 Hz	40 Hz
			X	40 Hz	45 Hz	50 Hz
	X	X		30 Hz	35 Hz	40 Hz
	X		X	40 Hz	45 Hz	50 Hz
		X	X	40 Hz	45 Hz	50 Hz
	X	X	X	45 Hz	50 Hz	55 Hz
Fire Suppression				60 Hz		

Figure 1

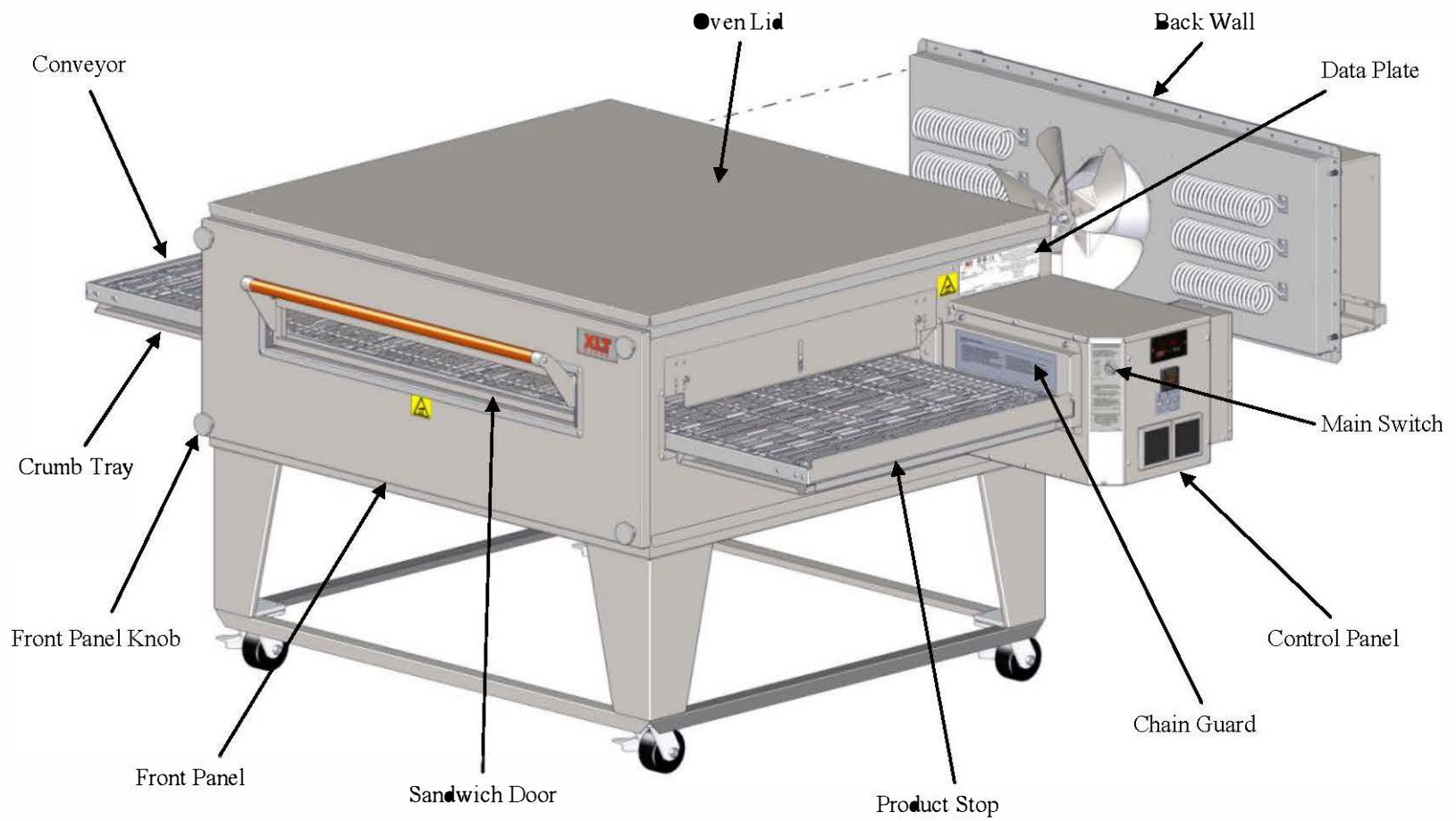
For operation instructions of manual mode see the I&O Manual at www.xltovens.com

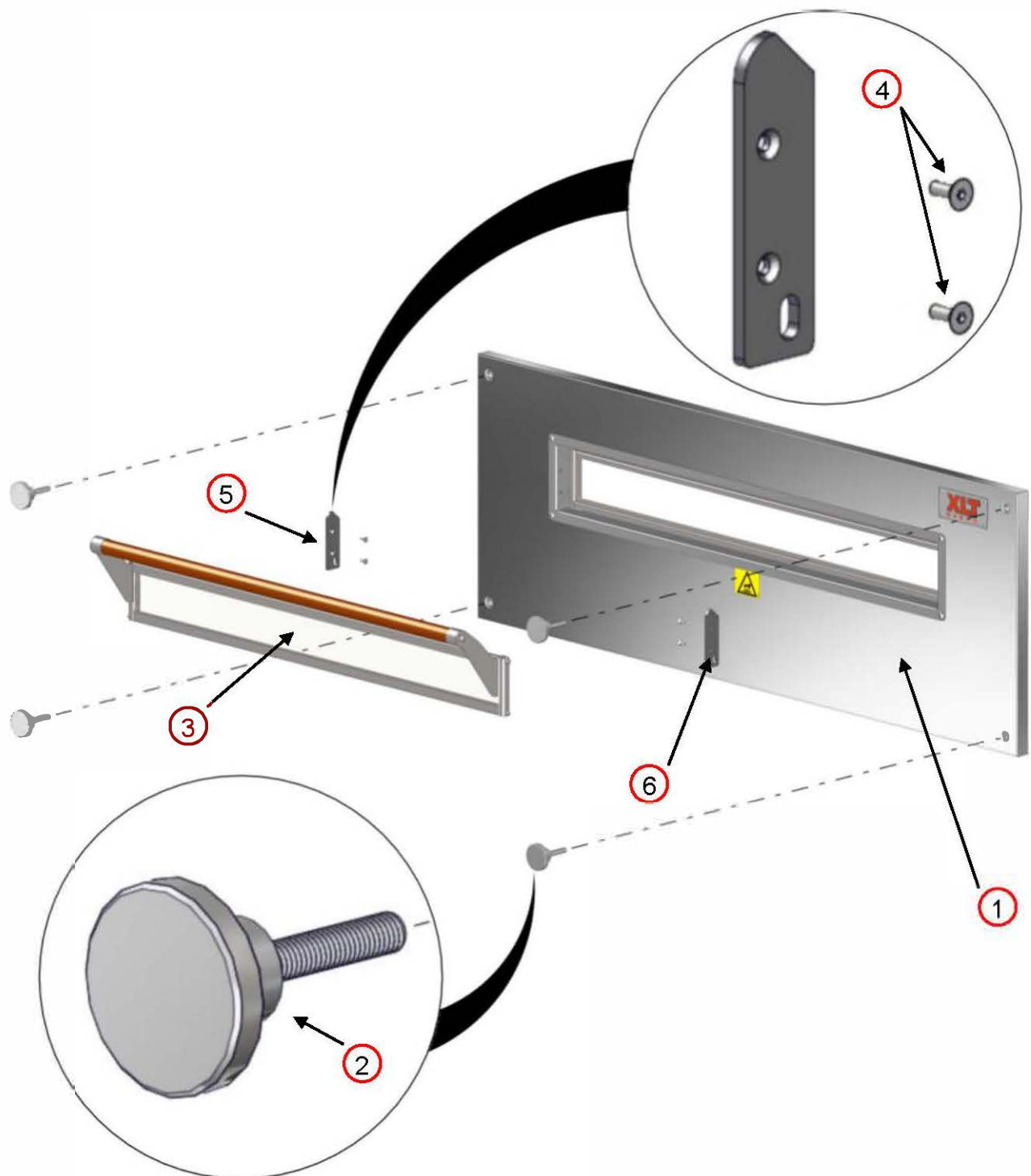
How to order Parts

Have all information ready when calling XLT. Below is a list of information that is required for all orders. At the bottom of the BOM on the following parts overview pages are additional requirements needed depending on your parts order.

Oven/Hood information required:

- Model #
- Serial #
- Manufacture Date
- Phone #
- Contact name
- Bill to
- Ship to
- Credit card information

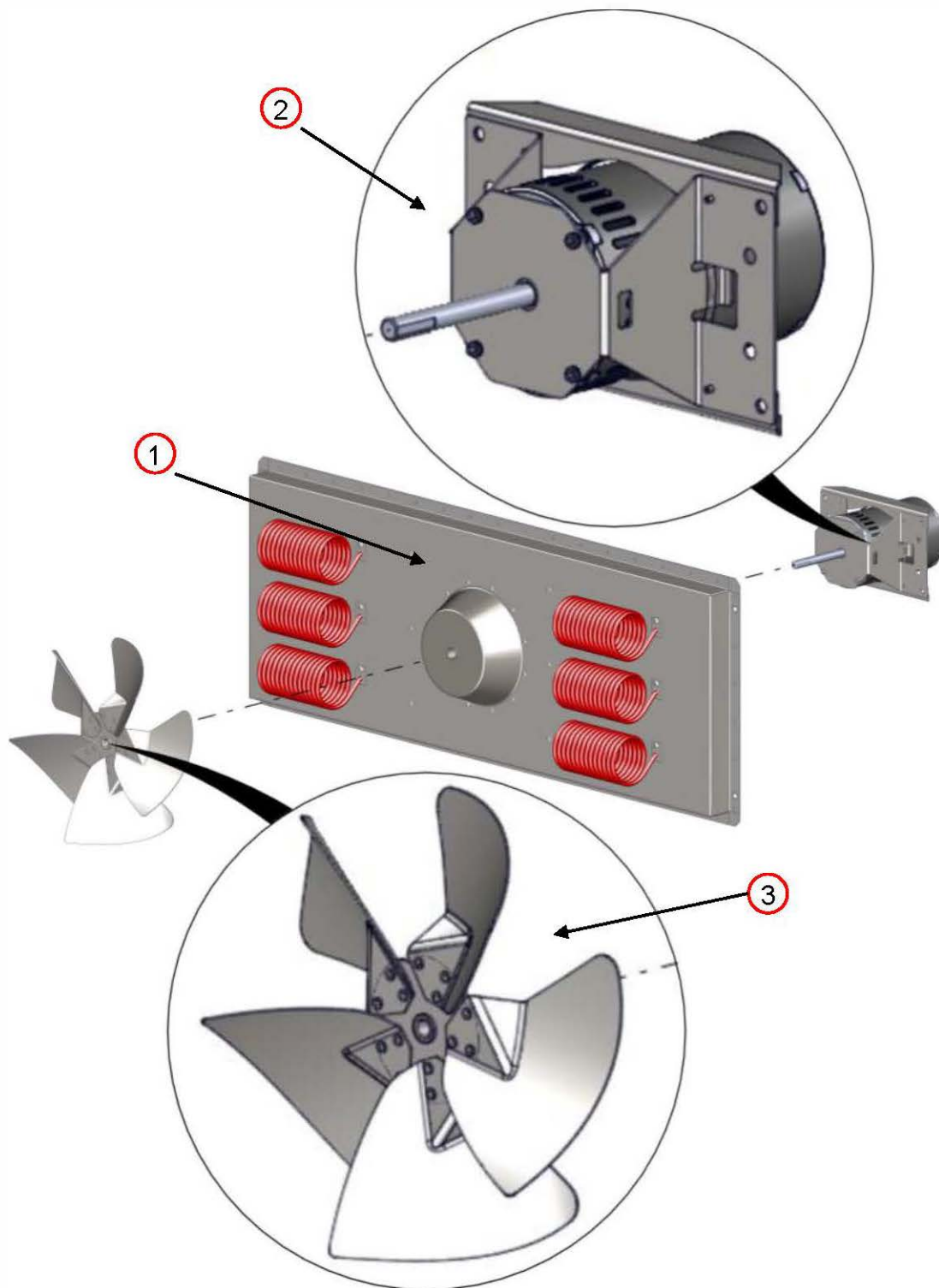




FRONT PANEL			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	XA 6500	Front Panel Assembly
2	4	XA 6505	Front Panel Knob
3	1	XA 6600	Sandwich Door
4	4	XF 126-2	Screw 10-24
5	1	XM 6703	Door Retainer Left
6	1	XM 6704	Door Retainer Right

Front Panel information required:

- Size of Oven
- Short or Long Window
- Stainless or Wood Handle
- 3" or 5" Window Opening

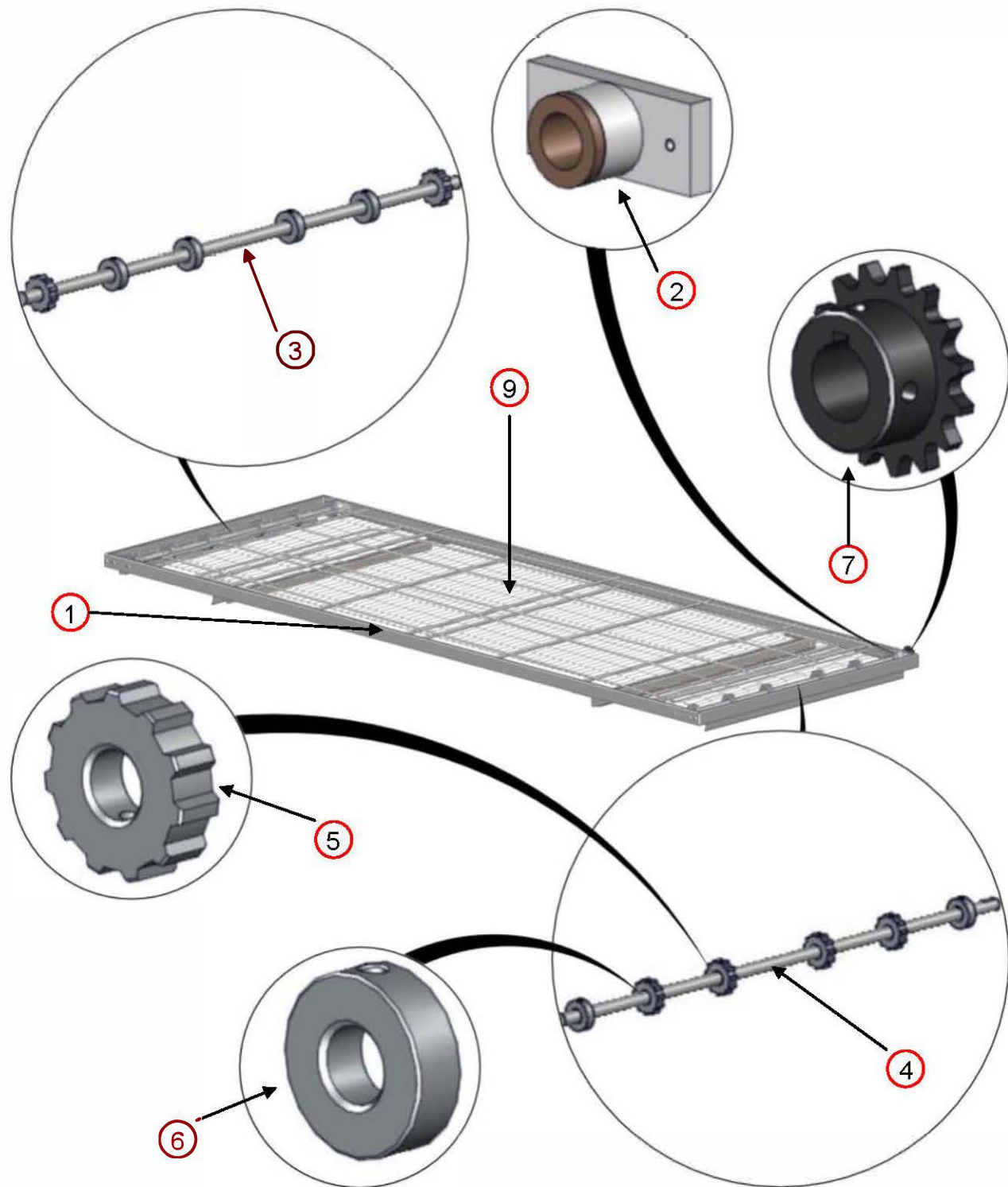


Electric Oven Element Usage								
Oven Size	208V- 4500W	Qty	240V- 4500W	Qty	208V- 5300W	Qty	240V- 5300W	Qty
1832-208 V					x	3		
1832-240 V							x	3
1832-380 V							x	3
1855-208 V					x	6		
1855-240 V							x	6
1855-380 V							x	6
1855-480 V							x	6
2440-208 V	x	6						
2440-240 V			x	6				
2440-380 V			x	6				
2440-480 V			x	6				
3240-208 V	x	6						
3240-240 V			x	6				
3240-380 V			x	6				
3240-480 V			x	6				
3255-208 V					x	6		
3255-240 V							x	6
3255-380 V							x	6
3255-480 V							x	6
3855-208 V					x	6		
3855-240 V							x	6
3855-380 V							x	6
3855-480 V							x	6

BACK WALL			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	XA 50	Back Wall Assembly
2	1	XA 5009	Fan Motor w/ Mount
3	1	XA 5200	Fan Blade

Back Wall information required:

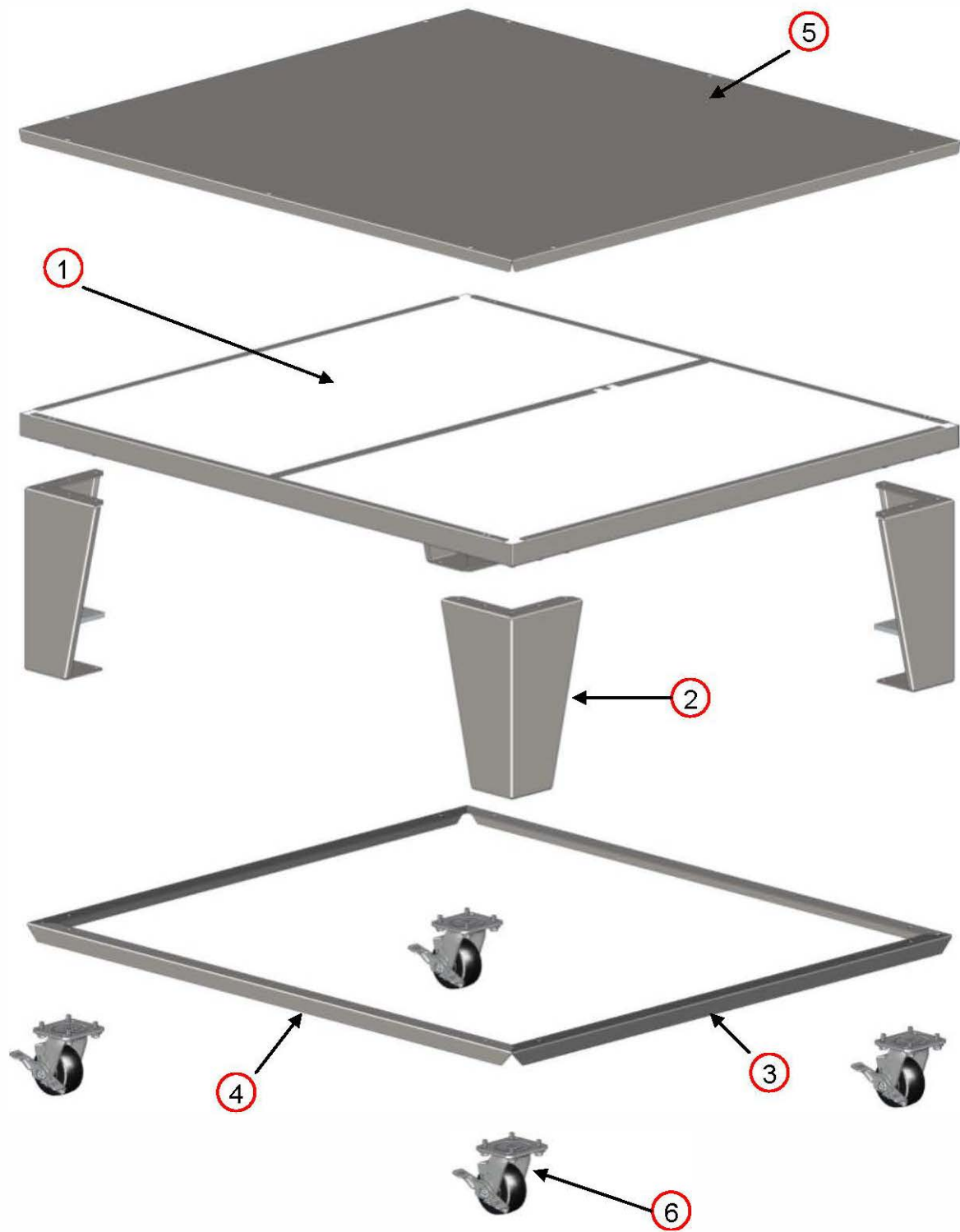
- Size of Oven
- Voltage



CONVEYOR			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	XA 7000	Conveyor Assembly
2	4	XA 7200	Conveyor Bearing Assembly
3	1	XM 7301	Conveyor Shaft Idle
4	1	XM 7302	Conveyor Shaft Drive
5	6	XM 7403	Conveyor Roll Notched
6	6	XM 7404	Conveyor Roll Plain
7	1	XP 9503	Conveyor Sprocket Driven 15
8	1	XP 9504	Conveyor Drive Chain
9	1	XP 9506	Conveyor Belt

Conveyor information required:

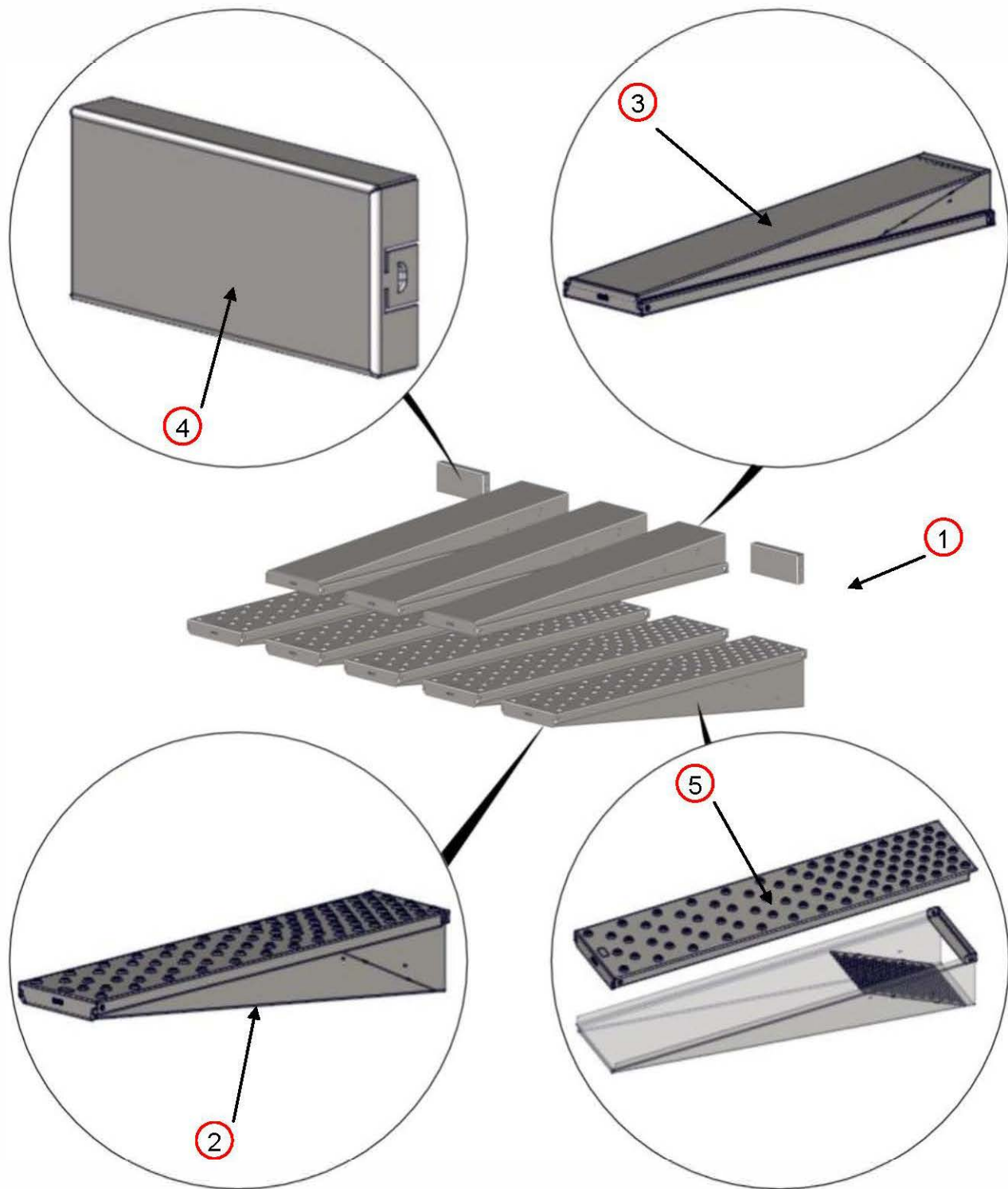
- Split Belt or Standard Belt
- Which part is required and how many?



BASE			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	XA 1000	Base Assembly
2	4	XM 1003	Base Leg
3	2	XM 1006	Side Leg Angle
4	2	XM 1007	Front/Back Leg Angle
5	1	XM 1010	Oven Lid
6	4	XP 1004	Caster

Base information required:

- Size of Oven
- Single, Double, or Triple Stack



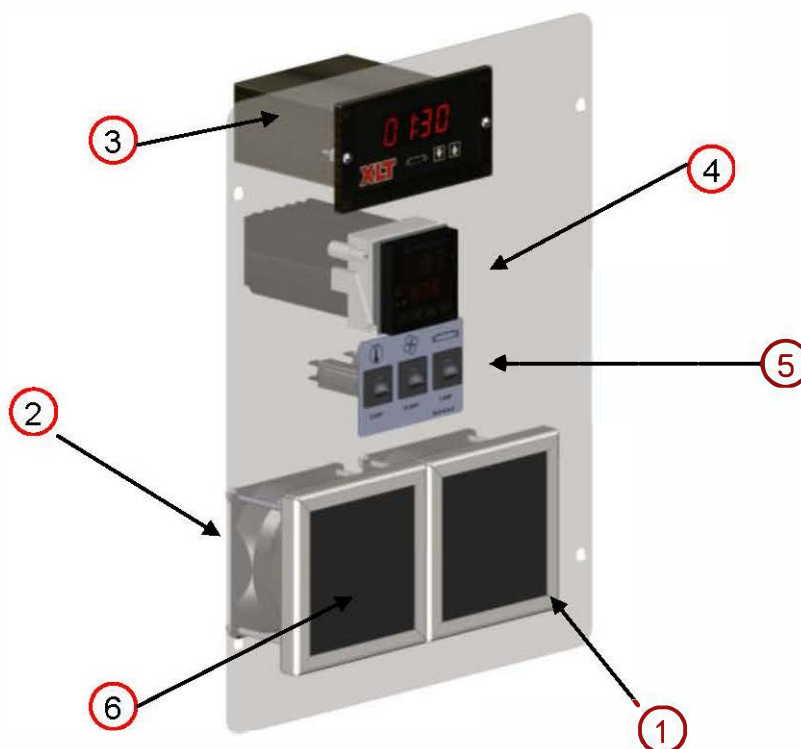
FINGERS			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	XA 8Xxxx	Finger Group Assembly
2	4	XA 8001-B	Finger Body Bottom
3	4	XA 8001-T	Finger Body Top
4	2	XM 8009	Finger Block Off Plate
5	1	XM 8xxx	Finger Outer Plate

Finger information required:

- Size of Oven
- Customer name
- Part number on front of finger outer



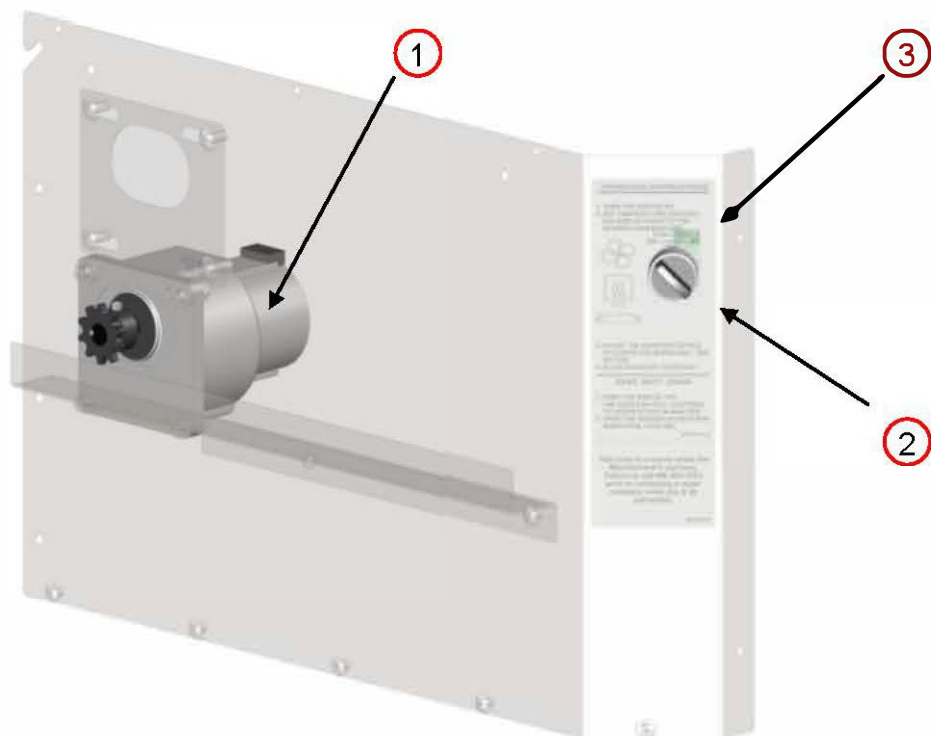
Service Position



CONTROL PANEL			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2.00	XM 4520-EL	Fan Guard / Filter Holder
2	2.00	XP 4501-EL	FPPG Fan EL M2
3	1.00	XP 4507-24-A	Conveyor Speed Control 24VDC
4	1.00	XP 4508-EL	Temperature Control ELECTRIC
5	1.00	XP 4515-CB-xxx	? Amp Circuit Breaker
6	1.00	XP 4520-EL	Fan Filter

Control Panel information required:

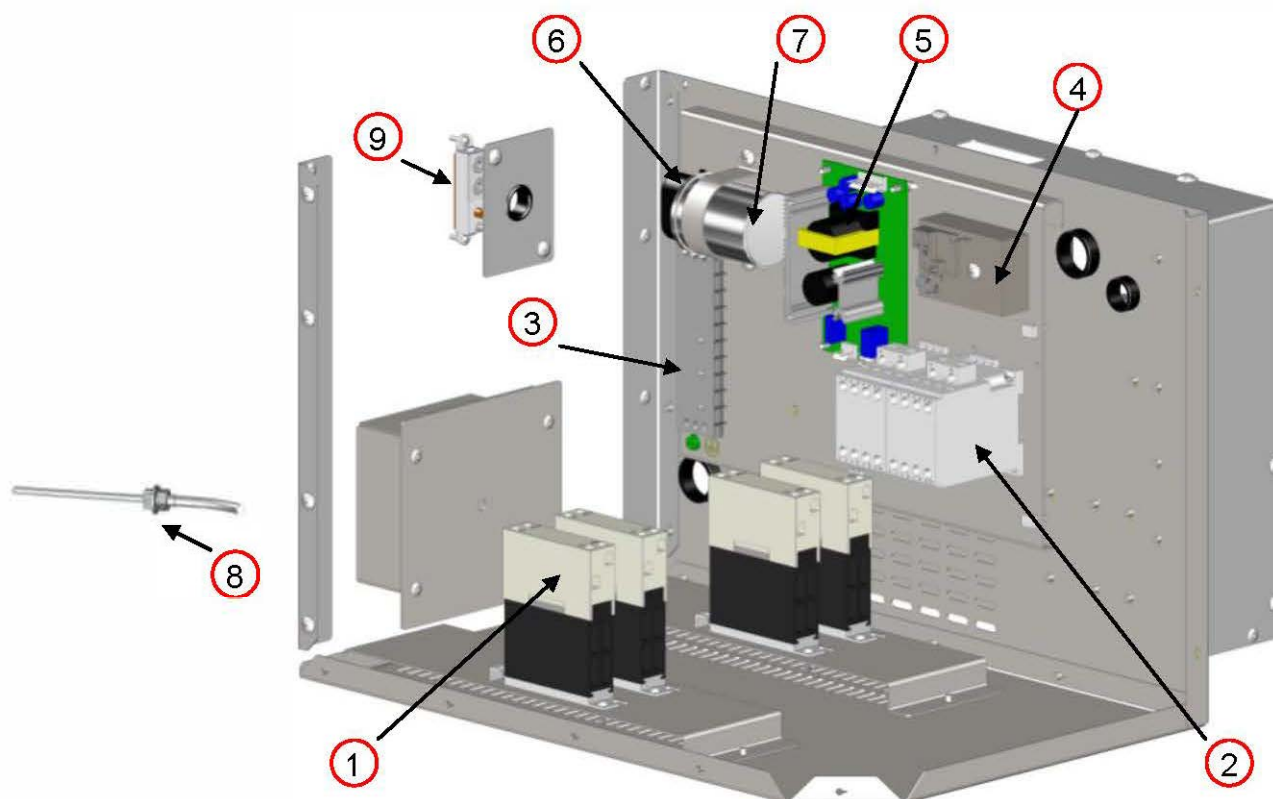
- Size of Oven
- Voltage
- What amp circuit breaker you need



CONTROL BOX FRONT			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1.00	XA 4117-12.5 RPM STD	Conv Motor Assy 12.5 RPM STD
3	1.00	XP 4101A	Switch Operator
4	1.00	XP 4102A	Contact Block 1 Pole w/Mount

Control Box Front information required:

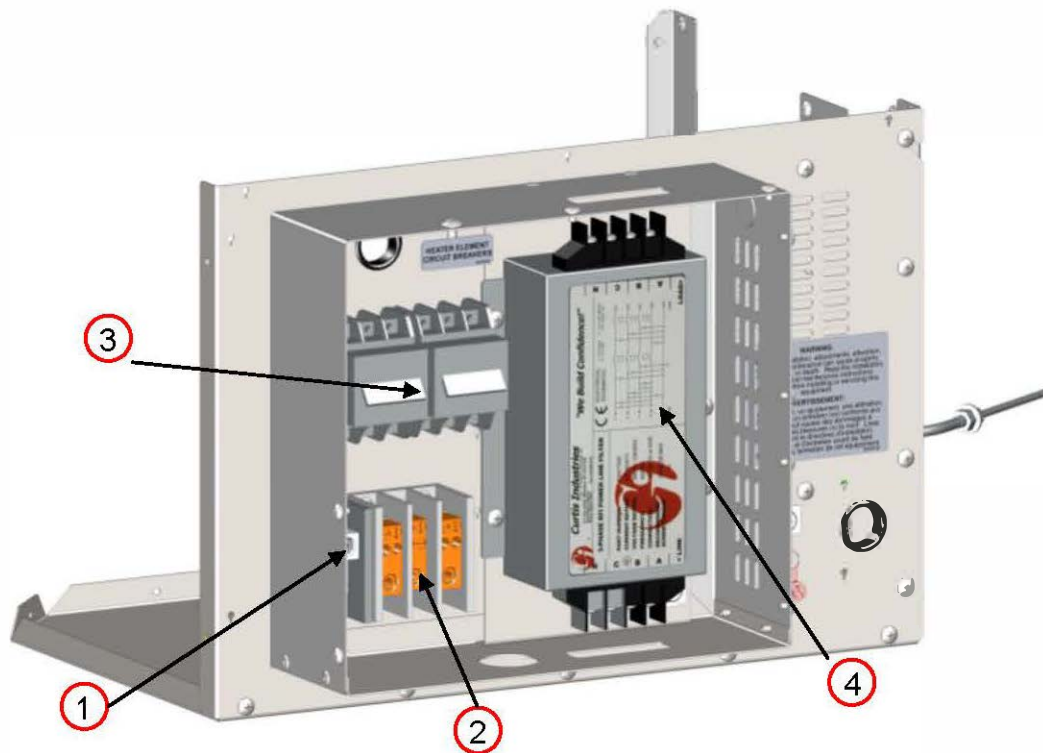
- Size of Oven



ITEM	QTY	PART NUMBER	DESCRIPTION
1	4.00	XP 4305A-30	Relay 30A Solid State
2	2.00	XP 4306A-30	30 Amp 3 Phase Contactor
3	1.00	XP 4701-10	Terminal Strip 10 Place
4	1.00	XP 4704	Cool Down Timer 120/230 Volt R1
5	1.00	XP 4716	Power Supply PS
6	1.00	XP 5012	Capacitor Boot
7	1.00	XP 5014-30	Capacitor Baldor 3/4 HP 30uF
8	1.00	XP 4509	Thermocouple Type K 48 (60 for xx70 LH)
9	1.00	XP 4713	High Temp Limit Switch S3

Control Box Back information required:

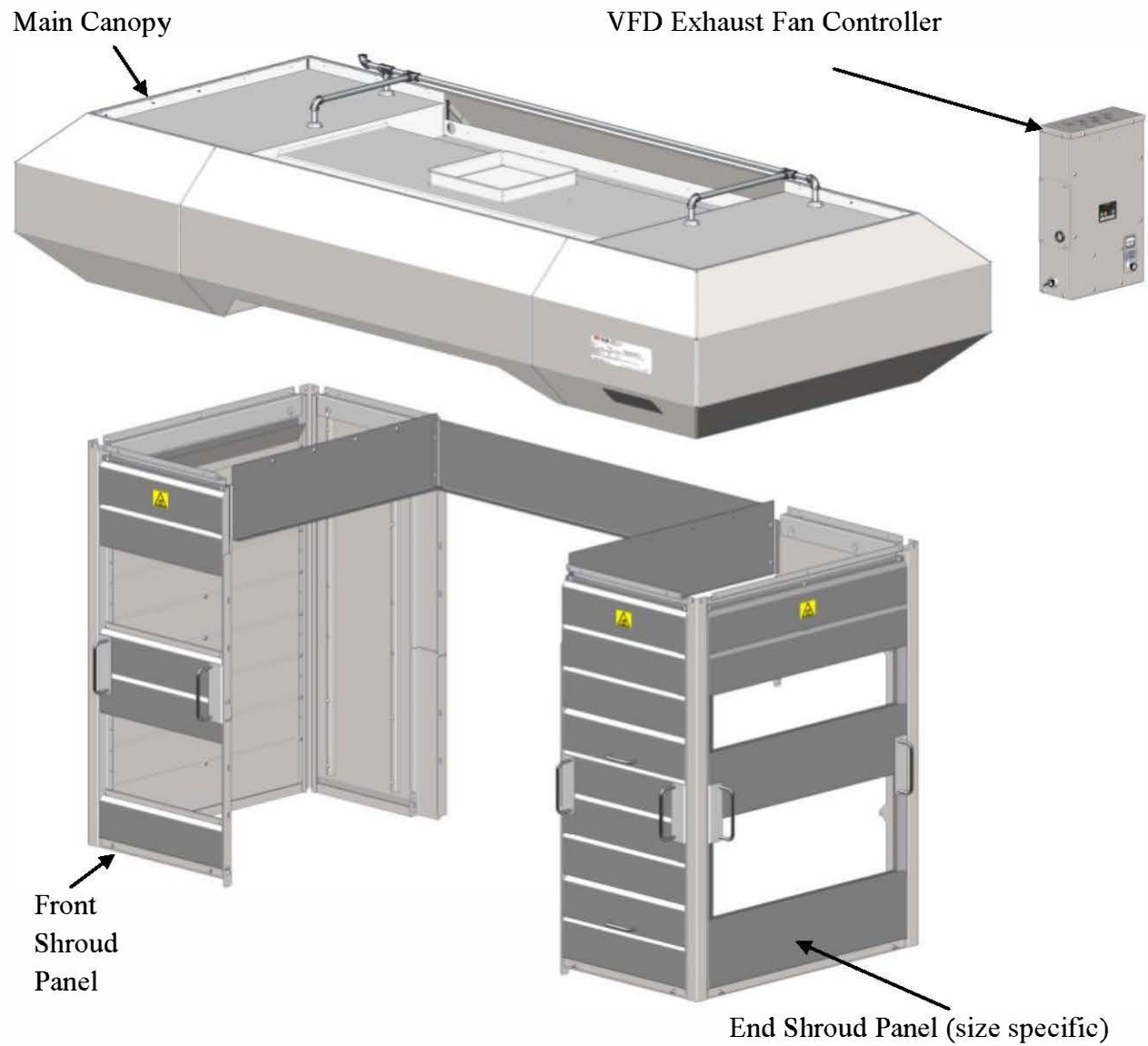
- Size of Oven
- Voltage

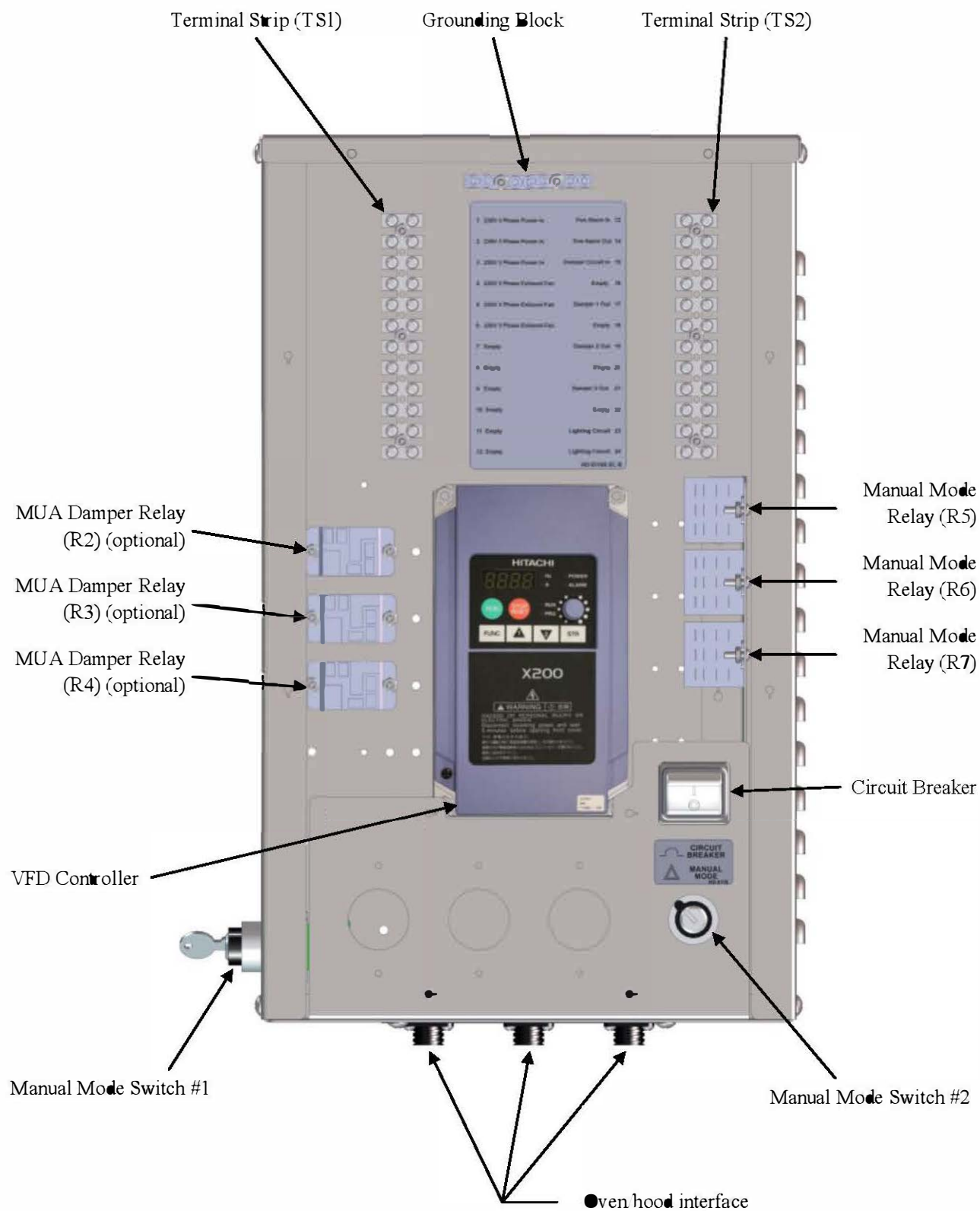


CONTROL BOX REAR			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1.00	XP 4302-1	1 Pole Power Block Electric
2	1.00	XP 4302-3	3 Pole Power Block Electric
3	2.00	XP 4303	3 Pole Circuit Breaker EL
4	1.00	XP 4304	Filter EMI 4 Wire

Control Box Rear information required:

- Size of Oven
- Voltage



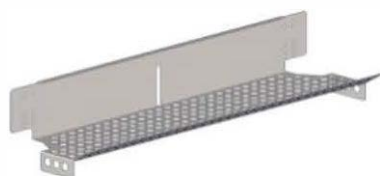


VFD Control Box (Cover removed)

VFD			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	4.00	XP 4102A	Contact Block 1 Pole w/Mount
2	1.00	HP-2051	VFD Hitachi X200-007NFU
3	3.00	HP-2054	Receptacle Single 125VAC 20A
4	4.00	HP-2055A-S	Relay 11 Pin Flange Mount
5	4.00	HP-2056A	W9A Minature Power Relay
6	2.00	HP-2057-12	Terminal Block 12 POS
7	1.00	HP-2060-S	Circuit Breaker Exhaust Fan
8	1.00	HP-2061	Current Sensing Light
9	1.00	XP 4101A-KLH	Keyed Switch Operator LH
10	1.00	XP 4101A-KRH	Keyed Switch Operator RH
11	2.00	XP 4102A	Contact Block 1 Pole w/Mount

VFD Control Box Back information required:

- Size of Oven
- Voltage



PN	Description
XA 9521-18	Conveyor Shelf
XA 9521-24	Conveyor Shelf
XA 9521-32	Conveyor Shelf
XA 9521-38	Conveyor Shelf

PN	Description
XA 9400-xx32-2	Fire Suppression Kit, Double Stack
XA 9400-xx40-2	Fire Suppression Kit, Double Stack
XA 9400-xx55-2	Fire Suppression Kit, Double Stack
XA 9400-xx70-2	Fire Suppression Kit, Double Stack

Single & Triple Stack kits available. Contact factory for details.

PN	Description
XM-1041-1832	Base Shelf, 1 Piece
XM-1041-3240	Base Shelf, 1 Piece
XM-1041-3255	Base Shelf, 1 Piece
XM-1041-3270	Base Shelf, 1 Piece

2 Piece shelves available. Contact factory for details.

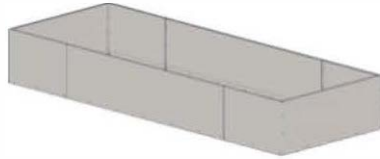
PN	Description
XA 0407	Restraint Kit

PN	Description
XM 9522	Conveyor Back Stop

PN	Description
XM 9524	Bubble Popper Holder

PN	Description
XM 9514-32	Conveyor Guard

Additional options available, contact factory.

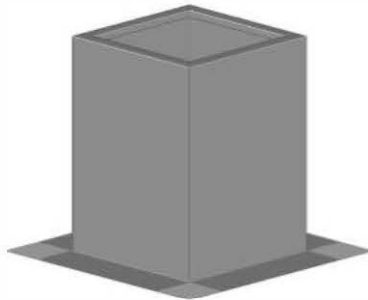


PN	Description
HA 4000-3255	Hood Valance Assy
HA 4000-3270	Hood Valance Assy

●other sizes available. Contact factory for details.



PN	Description
HA 4001-A	Duct Cover Assy
HA 4001-C	Duct Cover Assy
HA 4001-E	Duct Cover Assy



PN	Description
HP 1047	Roof Curb



PN	Description
HP 1046-ROOF	



PN	Description
XS 0300	Lifting Jacks, PAIR



PN	Description
XS 0306-1832	Lifting Plates, PAIR
XS 0306-2440	Lifting Plates, PAIR
XS 0306-32xx	Lifting Plates, PAIR
XS 0306-3870	Lifting Plates, PAIR



PN	Description
XS 0310	Lifting Pipe

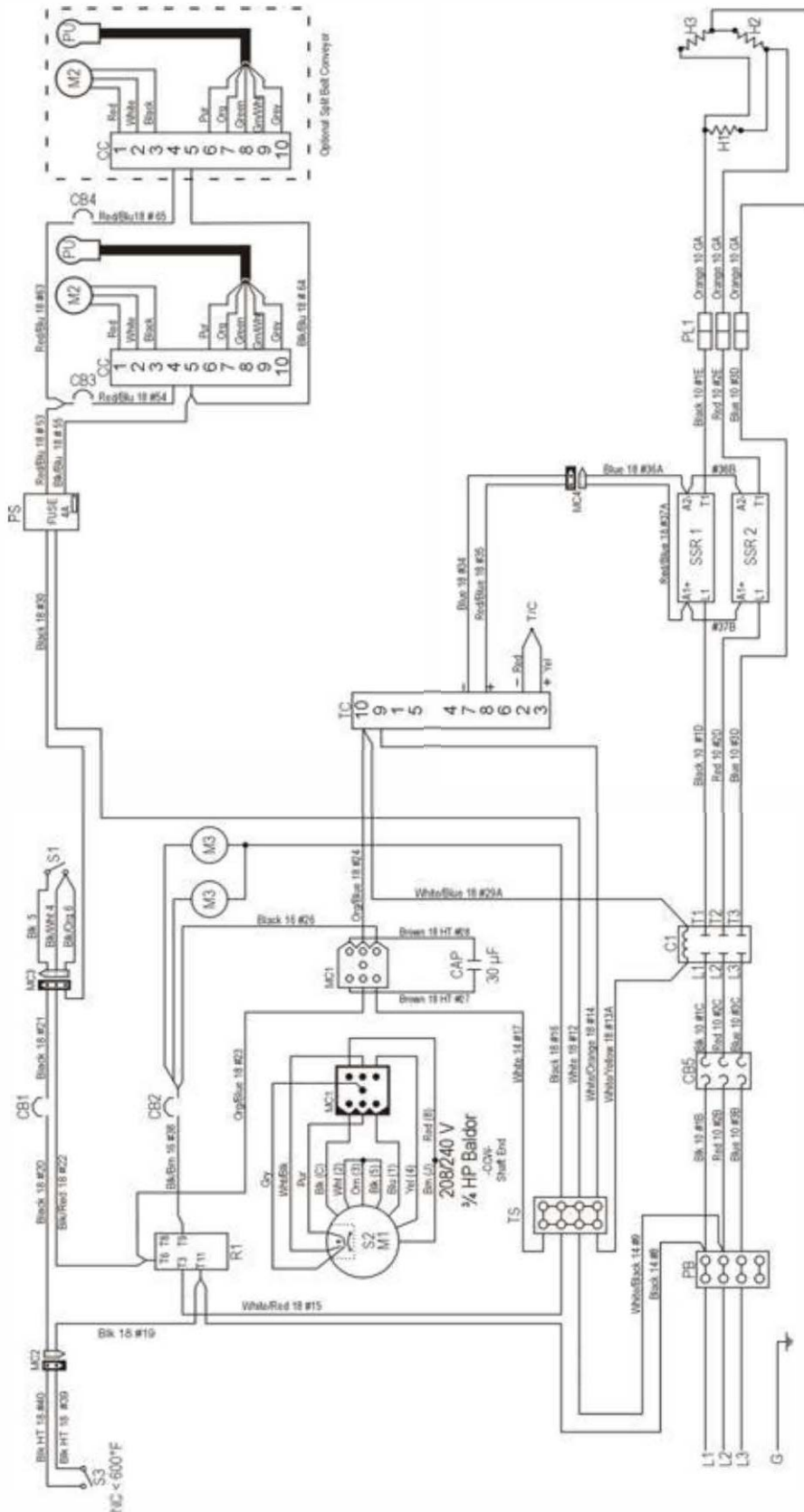


PN	Description
XS 0200	Cart Assy w/Straps

OVEN SCHEMATIC - STANDARD

45

1832-EL Standard 208/240 VAC



XLT-1832B-EL-S

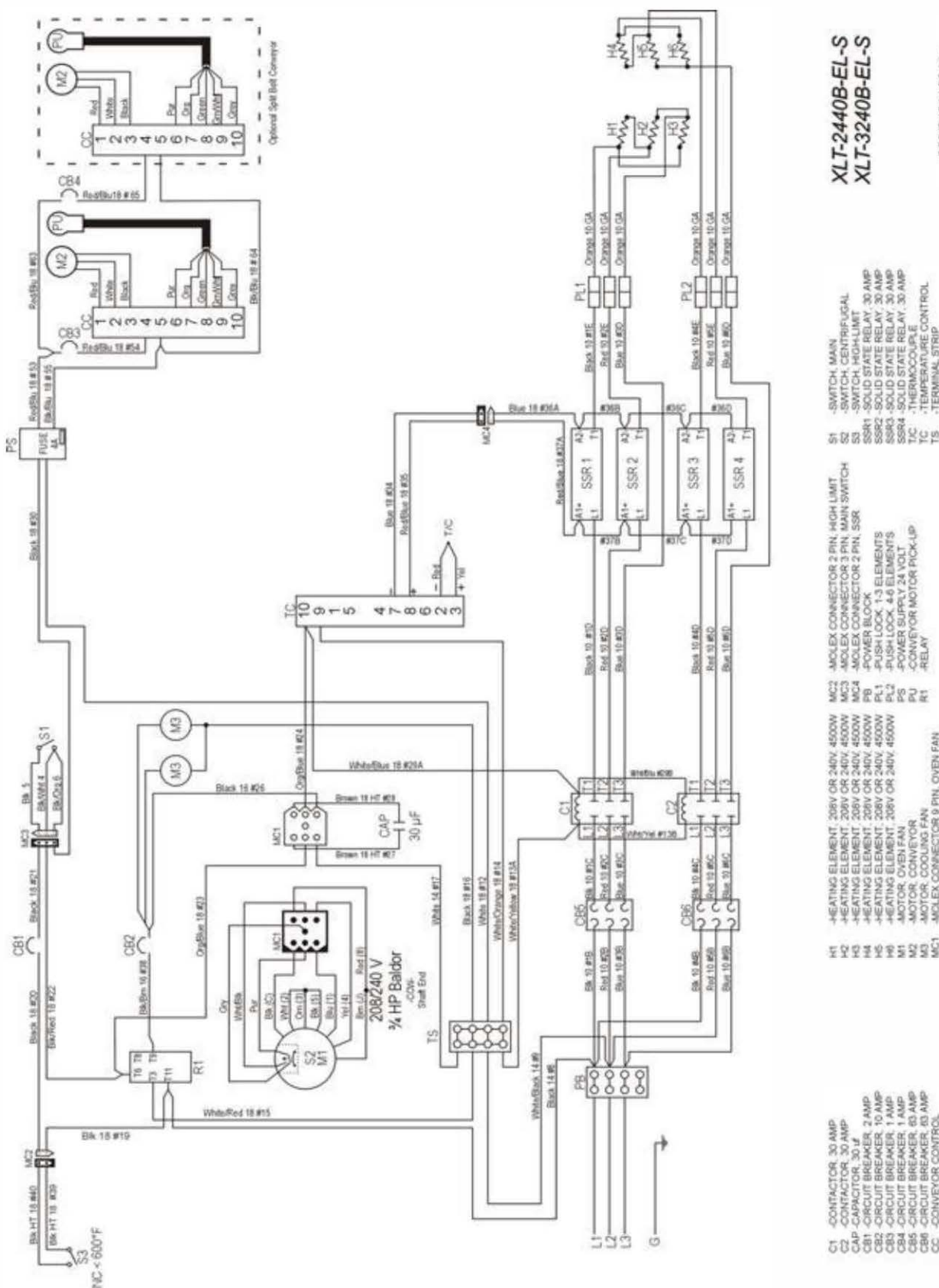
S1 - SWITCH MAIN
S2 - SWITCH CENTRIFUGAL
S3 - SWITCH HIGH-LIMIT
SSR1 - SOLID STATE RELAY 30 AMP
SSR2 - SOLID STATE RELAY 30 AMP
T/C - THERMOCOUPLE
T/C - TEMPERATURE CONTROL
T/C - TERMINAL STRIP

MC3 - MOLEX CONNECTOR 3 PIN, MAIN SWITCH
MC4 - MOLEX CONNECTOR 2 PIN, SSR
PB - POWER BLOCK
PL1 - PUSH LOCK 1-3 ELEMENTS
PS - POWER SUPPLY 24 VOLT
PU - CONVEYOR MOTOR PICK-UP
R1 - RELAY

H1 - HEATING ELEMENT 208V OR 240V 5300W
H2 - HEATING ELEMENT 208V OR 240V 5300W
H3 - HEATING ELEMENT 208V OR 240V 5300W
M1 - MOTOR OVEN FAN
M2 - MOTOR CONVEYOR
M3 - MOTOR COOLING FAN
MC1 - MOLEX CONNECTOR 9 PIN, OVEN FAN
MC2 - MOLEX CONNECTOR 2 PIN, HIGH LIMIT

C1 - CONTACTOR 30 AMP
CAP - CAPACITOR 30 μF
CB1 - CIRCUIT BREAKER 2 AMP
CB2 - CIRCUIT BREAKER 10 AMP
CB3 - CIRCUIT BREAKER 1 AMP
CB4 - CIRCUIT BREAKER 1 AMP
CB5 - CIRCUIT BREAKER 10 AMP
CC - CONVEYOR CONTROL

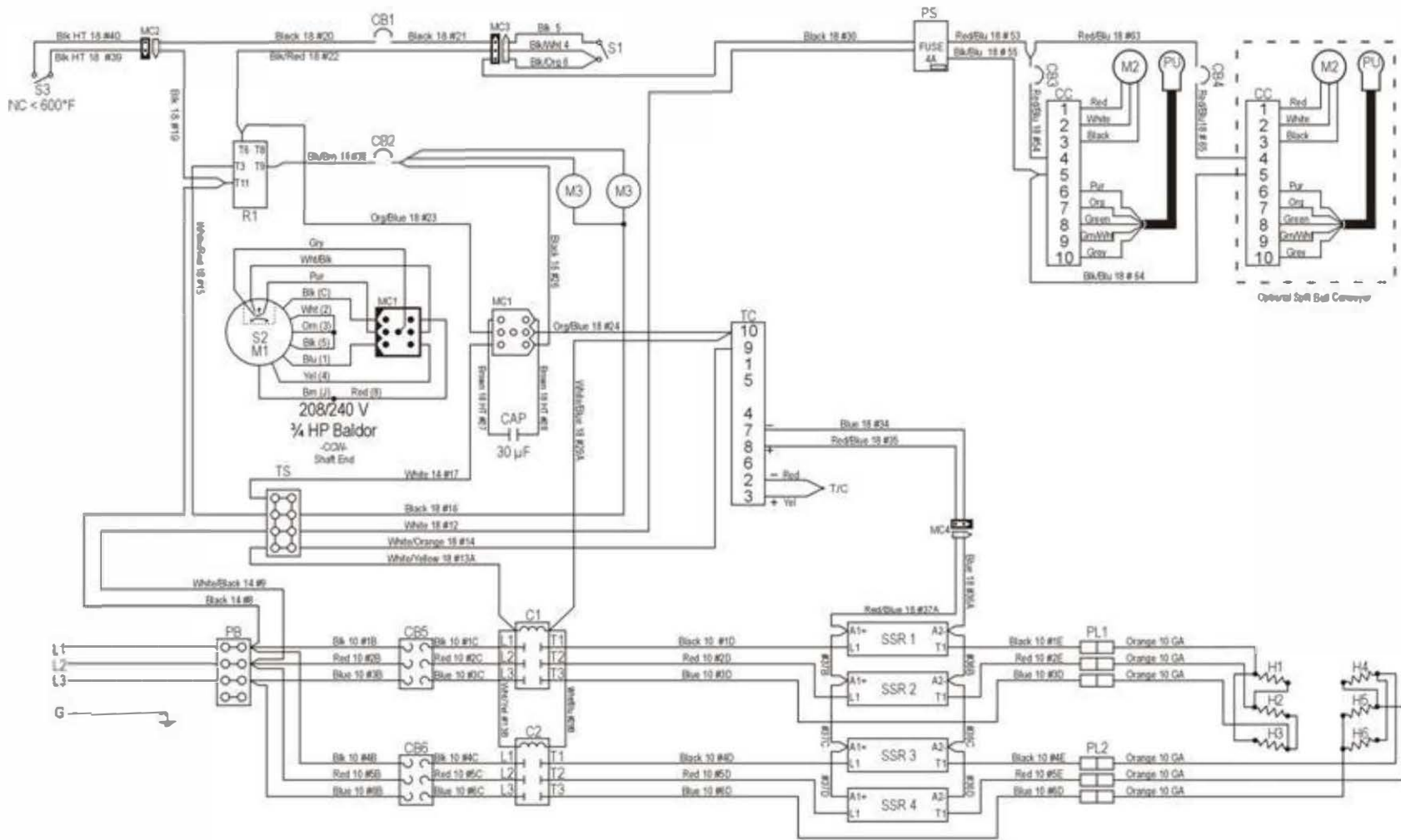
208/240 V 60 Hz
XD-9130B-208/240-5300-3
03/26/2012



XLT-2440B-EL-S
XLT-3240B-EL-S

208/240 V 60 Hz
XD-9130B-208/240-4500-6
03/26/2012

1855-EL, 3255-EL, 3855-EL Standard 208/240 VAC



C1 - CONTACTOR, 30 AMP
C2 - CONTACTOR, 30 AMP
C3 - CONTACTOR, 30 AMP
CB1 - CIRCUIT BREAKER, 2 AMP
CB2 - CIRCUIT BREAKER, 10 AMP
CB3 - CIRCUIT BREAKER, 1 AMP
CB4 - CIRCUIT BREAKER, 1 AMP
CB5 - CIRCUIT BREAKER, 60 AMP
CB6 - CIRCUIT BREAKER, 60 AMP
CC - CONVEYOR CONTROL

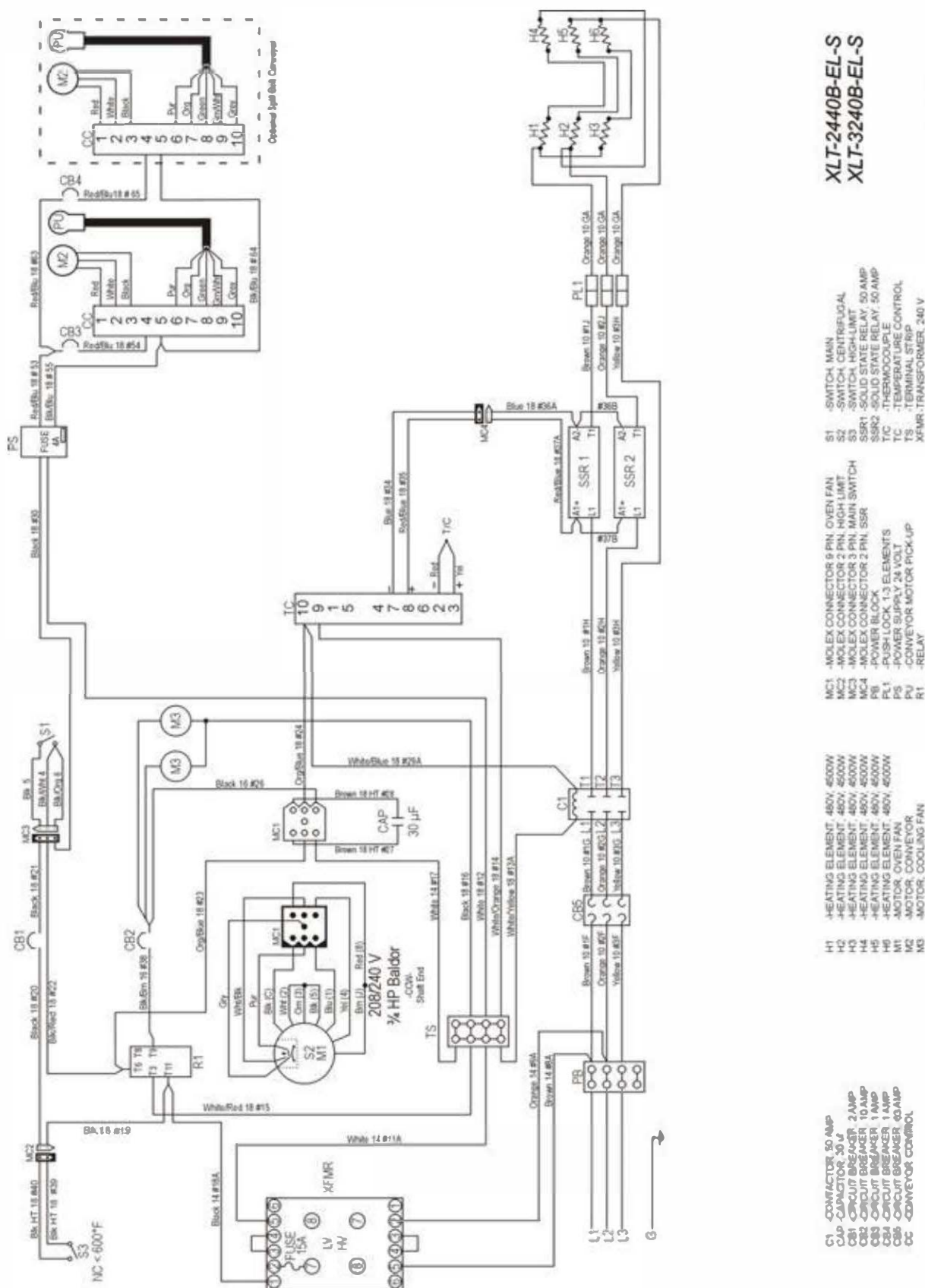
H1 - HEATING ELEMENT, 208V OR 240V, 5500W
H2 - HEATING ELEMENT, 208V OR 240V, 5500W
H3 - HEATING ELEMENT, 208V OR 240V, 5500W
H4 - HEATING ELEMENT, 208V OR 240V, 5500W
H5 - HEATING ELEMENT, 208V OR 240V, 5500W
M1 - MOTOR, OVEN FAN
M2 - MOTOR, CONVEYOR
M3 - MOTOR, COOLING FAN
MC1 - MOLEX CONNECTOR 9 PIN, OVEN FAN

MC2 - MOLEX CONNECTOR 2 PIN, HIGH LIMIT
MC3 - MOLEX CONNECTOR 3 PIN, MAIN SWITCH
MC4 - MOLEX CONNECTOR 2 PIN, SSR
PB - POWER BLOCK
PL1 - PUSH LOCK, 1-3 ELEMENTS
PL2 - PUSH LOCK, 4-6 ELEMENTS
PS - POWER SUPPLY 24 VOLT
PU - CONVEYOR MOTOR PICKUP
R1 - RELAY

S1 - SWITCH, MAIN
S2 - SWITCH, CENTRIFUGAL
S3 - SWITCH, HIGH LIMIT
SSR1 - SOLID STATE RELAY, 30 AMP
SSR2 - SOLID STATE RELAY, 30 AMP
SSR3 - SOLID STATE RELAY, 30 AMP
SSR4 - SOLID STATE RELAY, 30 AMP
T/C - THERMOCOUPLE
TC - TEMPERATURE CONTROL
TS - TERMINAL STRIP

XLT-1855B-EL-S
XLT-3255B-EL-S
XLT-3855B-EL-S

208/240 V 60 Hz
XD-91308-208/240-5300-6
03/26/2012



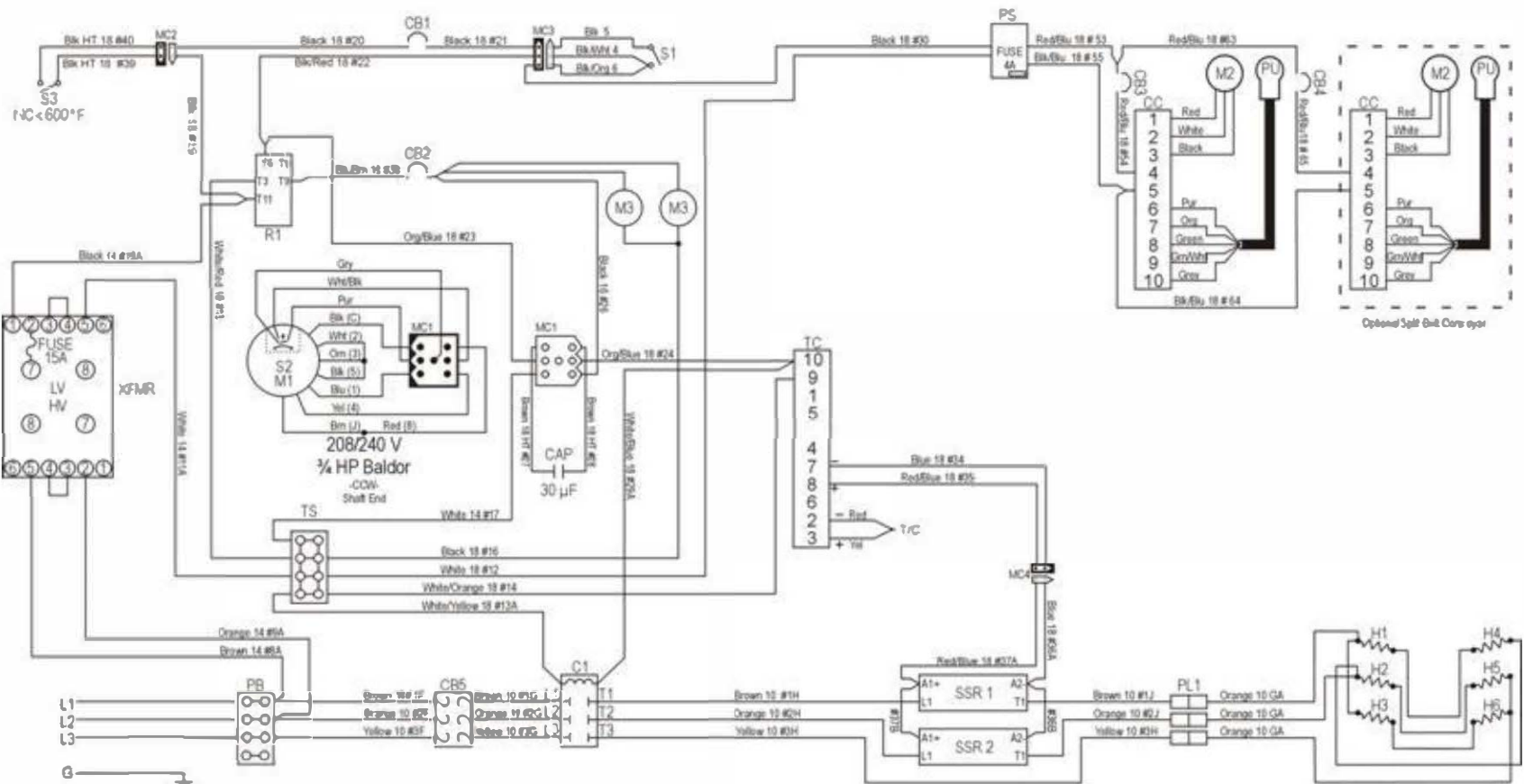
XLT-2440B-EL-S
XLT-3240B-EL-S

480 V 60 Hz
XD-91308-480-4500-6
03/26/2012

OVEN SCHEMATIC - STANDARD

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1855-EL, 3255-EL, 3855-EL Standard 480 VAC



C1 - CONTACTOR, 50 AMP
CAP - CAPACITOR, 30 μ
CB1 - CIRCUIT BREAKER, 2 AMP
CB2 - CIRCUIT BREAKER, 10 AMP
CB3 - CIRCUIT BREAKER, 1 AMP
CB4 - CIRCUIT BREAKER, 1 AMP
CB5 - CIRCUIT BREAKER, 60 AMP
CC - CONVEYOR CONTROL

H1 - HEATING ELEMENT, 480V, 5300W
H2 - HEATING ELEMENT, 480V, 5300W
H3 - HEATING ELEMENT, 480V, 5300W
H4 - HEATING ELEMENT, 480V, 5300W
H5 - HEATING ELEMENT, 480V, 5300W
H6 - HEATING ELEMENT, 480V, 5300W
M1 - MOTOR, OVEN FAN
M2 - MOTOR, CONVEYOR
M3 - MOTOR, COOLING FAN

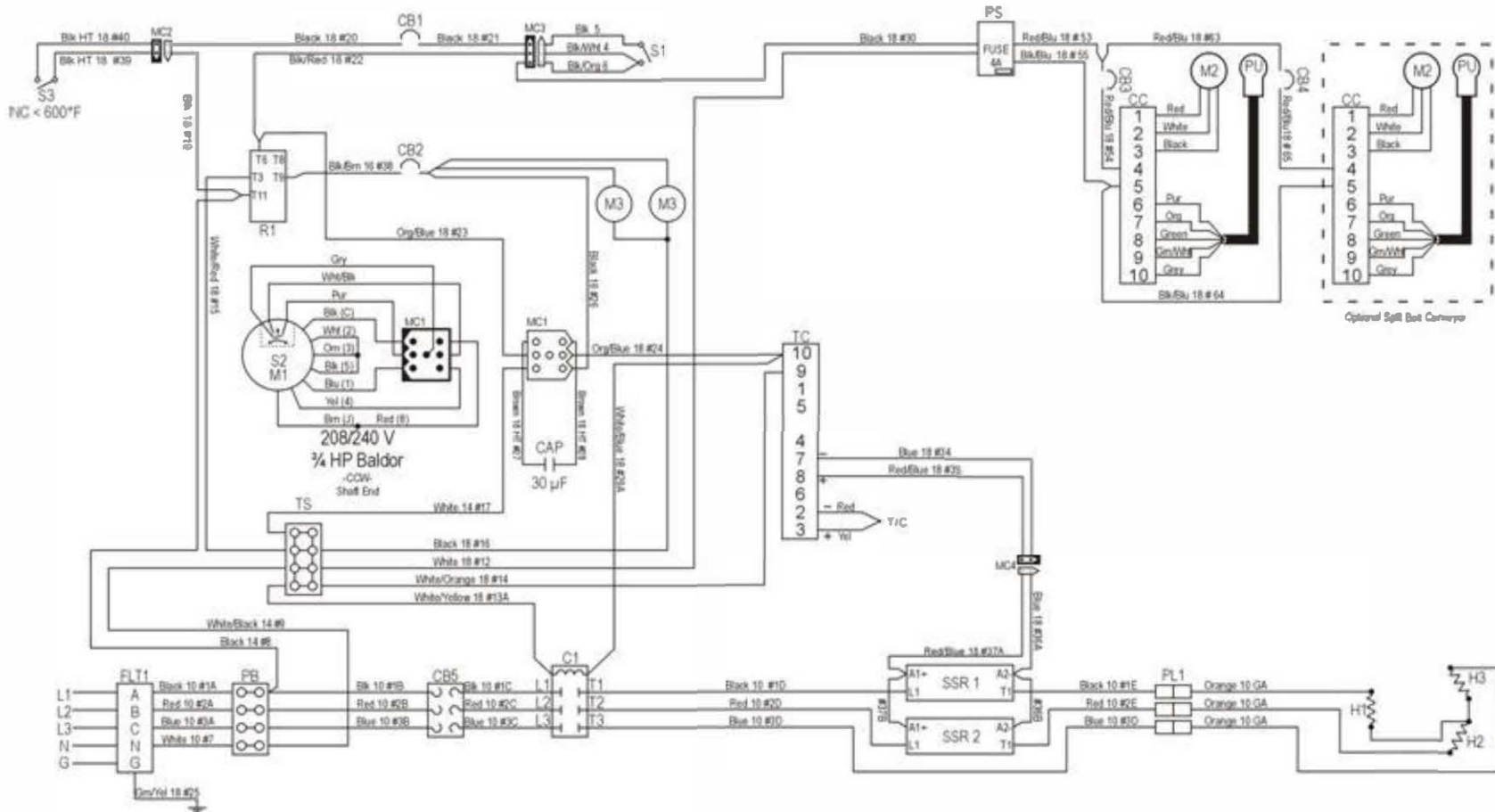
MC1 - MOLEX CONNECTOR 9 PIN, OVEN FAN
MC2 - MOLEX CONNECTOR 2 PIN, HIGH LIMIT
MC3 - MOLEX CONNECTOR 3 PIN, MAINS SWITCH
MC4 - MOLEX CONNECTOR 2 PIN, SSR
PB - POWER BLOCK
PL1 - PUSH LOCK, 1-3 ELEMENTS
PS - POWER SUPPLY 24 VOLT
PU - CONVEYOR MOTOR PICKUP
R1 - RELAY

S1 - SWITCH, MAIN
S2 - SWITCH, CENTRIFUGAL
S3 - SWITCH, HIGH LIMIT
SSR1 - SOLID STATE RELAY, 30 AMP
SSR2 - SOLID STATE RELAY, 50 AMP
T/C - THERMOCOUPLE
TC - TEMPERATURE CONTROL
TS - THERMAL STRIP
XFMR - TRANSFORMER, 240 V

XLT-1855B-EL-S
XLT-3255B-EL-S
XLT-3855B-EL-S

480 V 60 Hz
XD-91308-480-5300-6
03/26/2012

1832-EL, World 380 VAC



C1 - CONTACTOR, 30 AMP
CAP - CAPACITOR, 30 μF
CB1 - CIRCUIT BREAKER, 2 AMP
CB2 - CIRCUIT BREAKER, 10 AMP
CB3 - CIRCUIT BREAKER, 1 AMP
CB4 - CIRCUIT BREAKER, 1 AMP
CB5 - CIRCUIT BREAKER, 60 AMP
CC - CONVEYOR CONTROL
FLT1 - FILTER LINE VOLTAGE

FLT2 - FILTER CONTROL VOLTAGE
H1 - HEATING ELEMENT, 240V, 5300W
H2 - HEATING ELEMENT, 240V, 5300W
H3 - HEATING ELEMENT, 240V, 5300W
M1 - MOTOR, OVEN FAN
M2 - MOTOR, CONVEYOR
M3 - MOTOR, COOLING FAN
MC1 - MOLEX CONNECTOR 9 PIN, MAIN MOTOR
MC2 - MOLEX CONNECTOR 2 PIN, HIGH LIMIT

MC3 - MOLEX CONNECTOR 3 PIN, OVEN FAN
MC4 - MOLEX CONNECTOR 2 PIN, SSR
PB - POWER BLOCK
PL1 - PUSH LOCK, 1-3 ELEMENTS
PL2 - POWER SUPPLY 24 VOLT
PL3 - CONVEYOR MOTOR PICK-UP
PL4 - RELAY

S1 - SWITCH, MAIN
S2 - SWITCH, CENTRIFUGAL
S3 - SWITCH, HIGH LIMIT
SSR1 - SOLID STATE RELAY, 30 AMP
SSR2 - SOLID STATE RELAY, 30 AMP
T/C - THERMOCOUPLE
TC - TEMPERATURE CONTROL
TS - TERMINAL STRIP

XLT-1832B-EL-W

380 V 50/60 Hz
XD-9130B-380-5300-3
03/26/2012

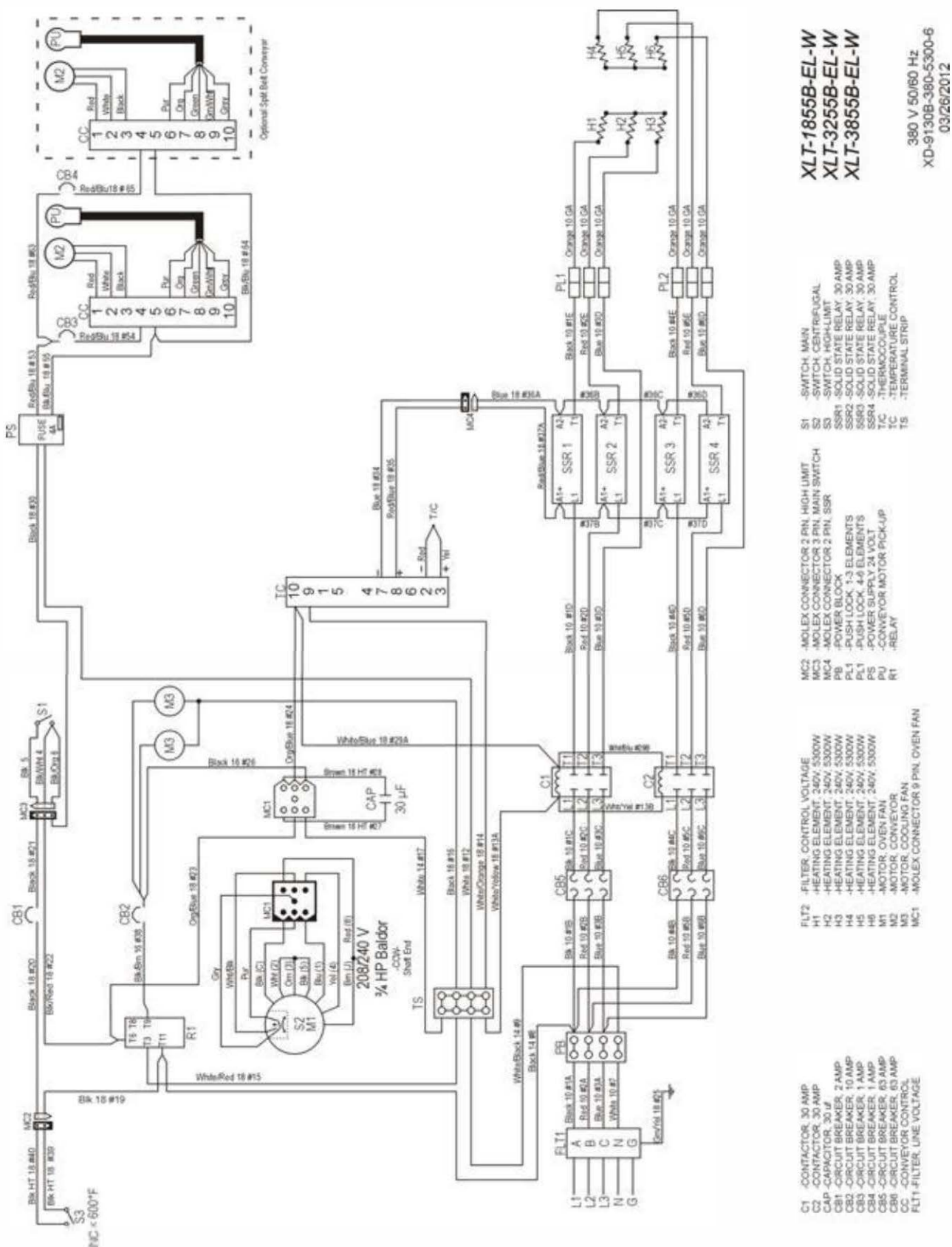


C1 CONTACTOR 30 AMP
C2 CONTACTOR 30 AMP
CAP CAPACITOR 30 μ
CB1 CIRCUIT BREAKER 2 AMP
CB2 CIRCUIT BREAKER 10 AMP
CB3 CIRCUIT BREAKER 1 AMP
CB4 CIRCUIT BREAKER 1 AMP
CB5 CIRCUIT BREAKER 63 AMP
CB6 CIRCUIT BREAKER 63 AMP
CC CONVEYOR CONTROL
PL11 FILTER LINE VOLTAGE

FLT2	FILTER CONTROL VOLTAGE
H1	HEATING ELEMENT 240V 4500W
H2	HEATING ELEMENT 240V 4500W
H3	HEATING ELEMENT 240V 4500W
H4	HEATING ELEMENT 240V 4500W
H5	HEATING ELEMENT 240V 4500W
H6	HEATING ELEMENT 240V 4500W
M1	MOTOR OVEN FAN
M2	MOTOR CONVEYOR
M3	MOTOR COOLING FAN
MC1	MOLEX CONNECTOR FOR OVEN FAN

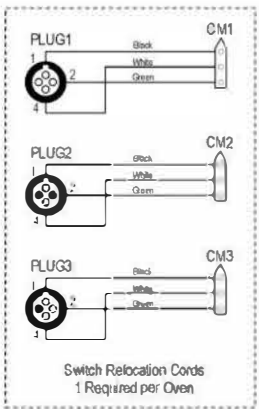
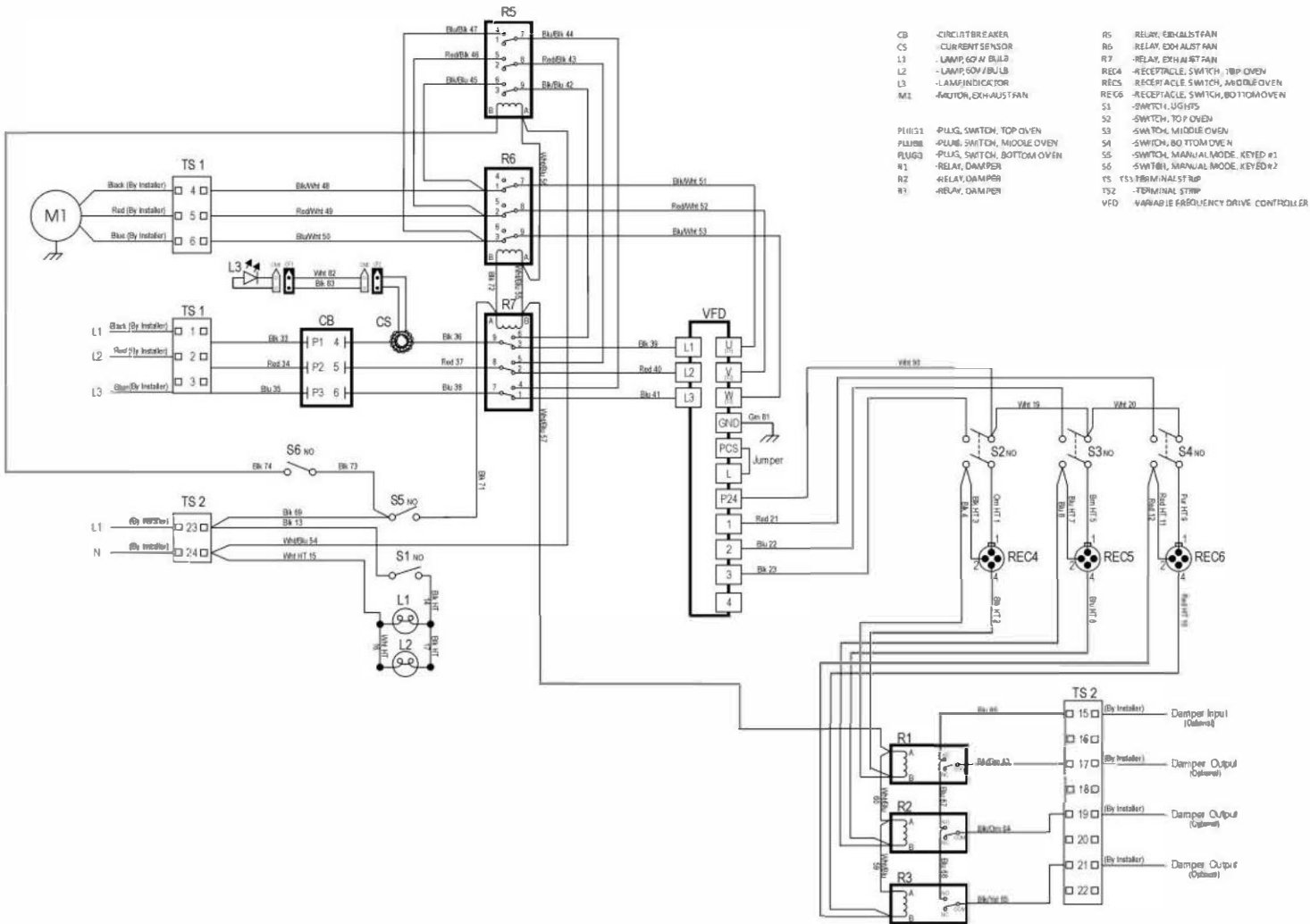
MC2	MOLEX CONNECTOR 2 PIN, HIGH LIMIT
MC3	MOLEX CONNECTOR 3 PIN, MAIN SWATCH
MC4	MOLEX CONNECTOR 2 PIN, SSR
PB	POWER BLOCK
PL1	PUSH LOCK, 1-3 ELEMENTS
PL1	PUSH LOCK, 4-6 ELEMENTS
PS	POWER SUPPLY 24V VOLT
PU	COMPRESSOR MOTOR PICKUP
R1	RELAY

S1	-SWITCH, MAIN	
S2	-SWITCH, CENTRIFUGAL	
S3	-SWITCH, HIGH-LIMIT	
SSR1	-SOLID STATE RELAY	30 AMP
SSR2	-SOLID STATE RELAY	30 AMP
SSR3	-SOLID STATE RELAY	30 AMP
SSR4	-SOLID STATE RELAY	30 AMP
TC	-THERMOCOUPLE	
TC	-TEMPERATURE CONTROL	
TS	-THERMAL STRIP	



HOOD SCHEMATIC - STANDARD w/VFD

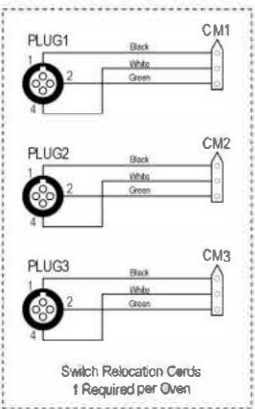
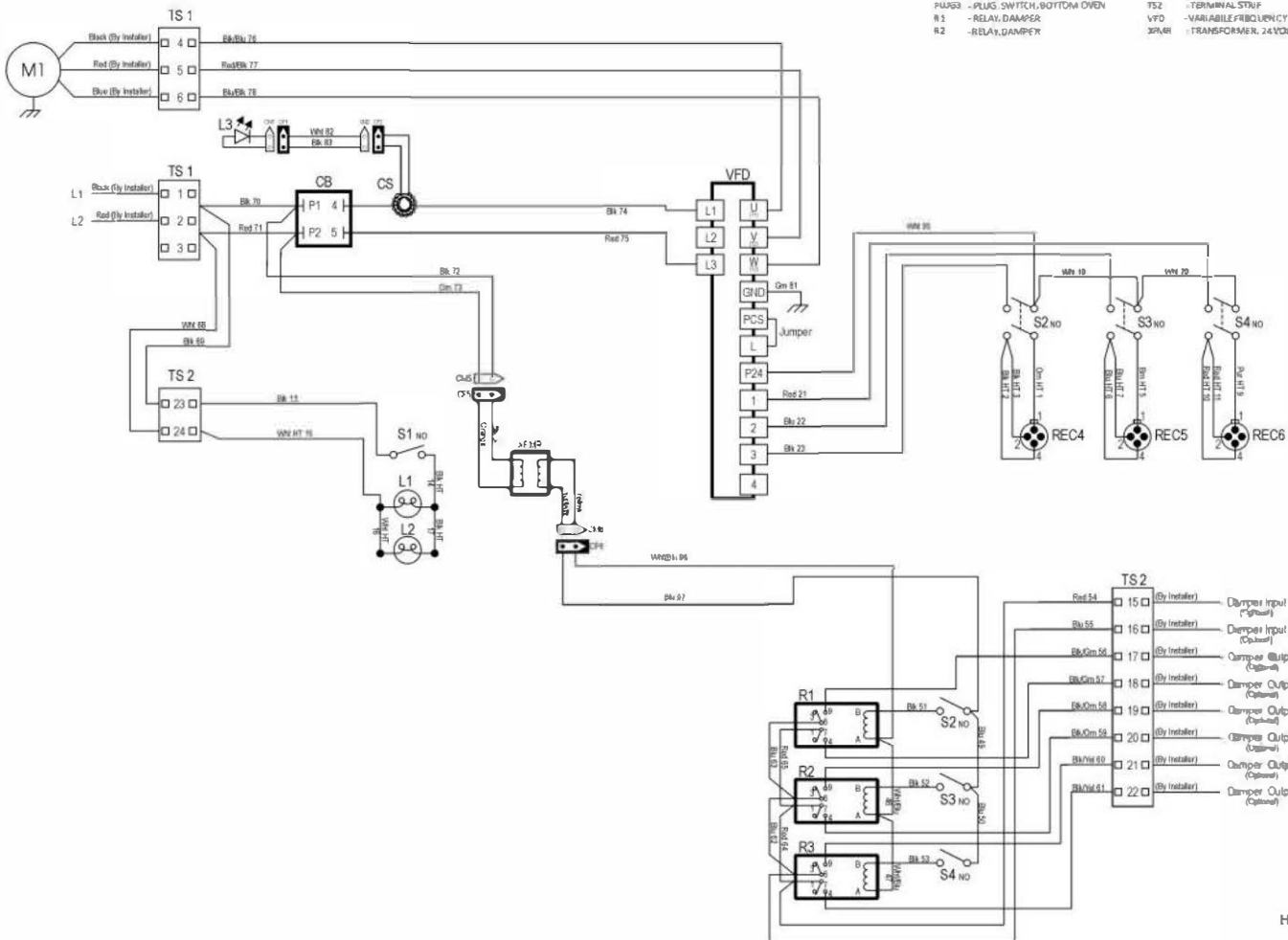
53

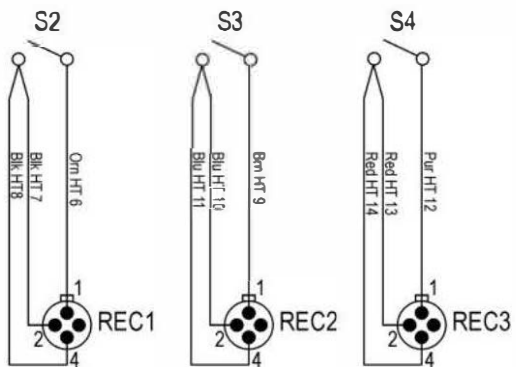


HD-91308-EL-S
03/27/2012

- | | | | |
|----|---------------------|---------|--------------------------------------|
| CB | -CIRCUIT BREAKER | R3 | -RELAY,DAMPER |
| CS | -CURRENT SENSATION | REC4 | -RECEPTACLE SWITCH, TOP OVEN |
| L1 | -LAMP,60 W BULB | REC5 | -RECEPTACLE SWITCH, MIDDLE OVEN |
| L2 | -LAMP,60 W BULB | REC6 | -RECEPTACLE SWITCH, BOTTOM OVEN |
| L3 | -LAMP, INDICATOR | S1 | -SWITCH, LIGHTS |
| M1 | -MOTOR, EXHAUST FAN | S2 | -SWITCH, TOP OVEN |
| | | S3 | -SWITCH, MIDDLE OVEN |
| | | S4 | -SWITCH, BOTTOM OVEN |
| | | TS1 | -TERMINAL STRIP |
| | | TS2 | -TERMINAL STRIP |
| | | VFD | -VARIABLE FREQUENCY DRIVE CONTROLLER |
| | | 3ØV, 60 | -TRANSFORMER, 24VOLT |

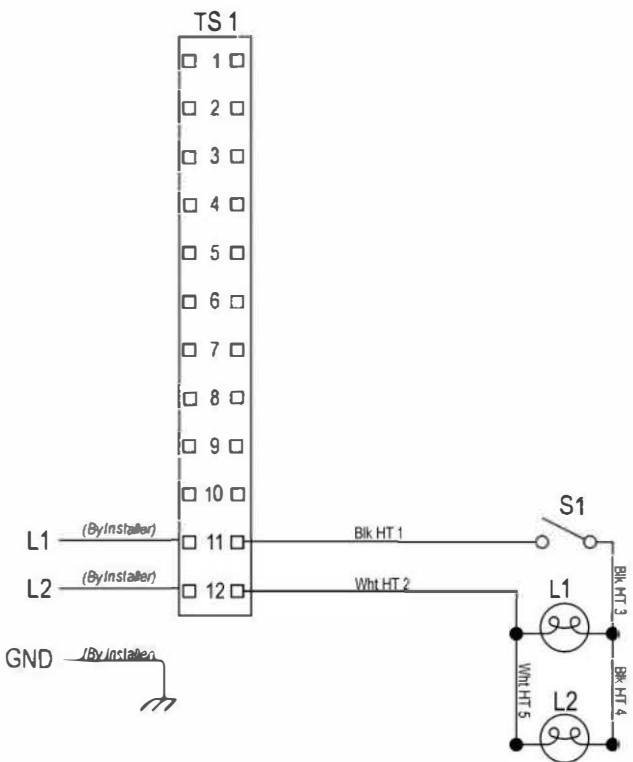
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|-------|-----------------------------|
| PLUG1 | -PLUGS, SWITCH, TOP OVEN |
| PLUG2 | -PLUGS, SWITCH, MIDDLE OVEN |
| PLUG3 | -PLUGS, SWITCH, BOTTOM OVEN |
| R1 | -RELAY,DAMPER |
| R2 | -RELAY,DAMPER |





- L1 - LAMP, 60W BULB
- L2 - LAMP, 60W BULB
- REC1 - RECEPTACLE, SWITCH, TOP OVEN
- REC2 - RECEPTACLE, SWITCH, MIDDLE OVEN
- REC3 - RECEPTACLE, SWITCH, BOTTOM OVEN
- S1 - SWITCH, LIGHTS
- S2 - SWITCH, TOP OVEN
- S3 - SWITCH, MIDDLE OVEN
- S4 - SWITCH, BOTTOM OVEN
- TS1 - TERMINAL STRIP

HD-9130C-N
08/22/2011



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