

Statement of Responsibilities

This document is for use by experienced and trained Qualified Cleveland Range, LLC Authorized Service Representatives who are familiar with both the safety procedures, and equipment they service.

Cleveland Range, LLC assumes no liability for any death, injury, equipment damage, or property damage resulting from use of, improper use of, or failure to use the information contained in this document.

Cleveland Range, LLC has made every effort to provide accurate information in this document, but cannot guarantee that this document does not contain unintentional errors and omissions.

The information in this document may be subject to technical and technological changes, revisions, or updates.

Cleveland Range, LLC assumes no liability or responsibility regarding errata, changes, revisions, or updates.

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to follow industry standard safety procedures, including, but not limited to, OSHA regulations, and disconnect / lock out / tag out procedures for all utilities including steam, and disconnect / lock out / tag out procedures for gas, electric, and steam powered equipment and / or appliances

All utilities (gas, electric, water and steam) should be turned OFF to the equipment and locked out of operation according to OSHA approved practices during any servicing of Cleveland Range equipment

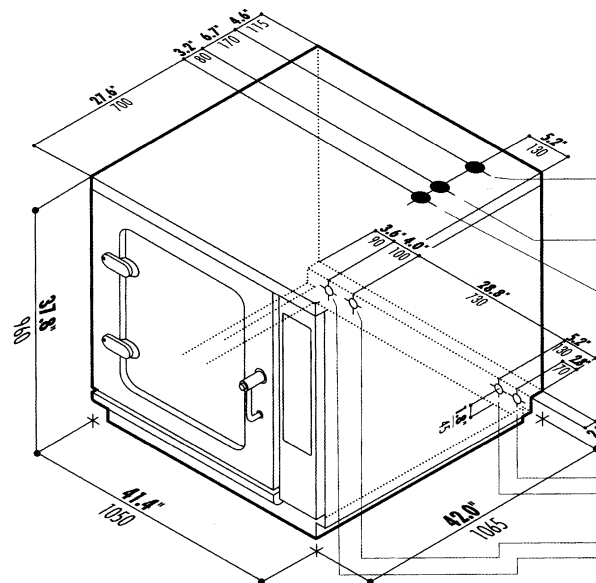
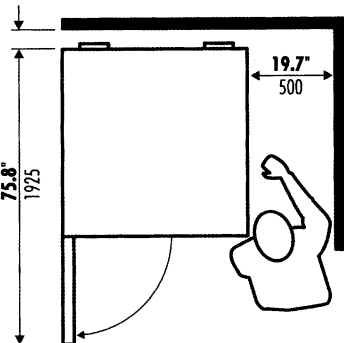
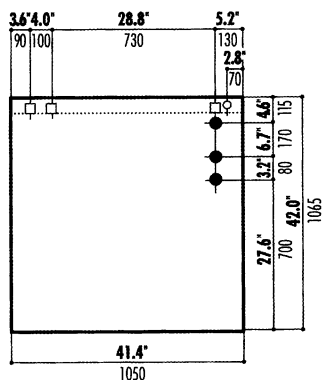
Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to maintain up-to-date knowledge, skills, materials and equipment.

CombiCraft® ONE COMPARTMENT-FULL SIZE FLOOR MODEL TYPE-ELECTRIC “SPLASH PROOF SERIES”

MODEL: ☐ CCE-210X

ITEM NUMBER _____

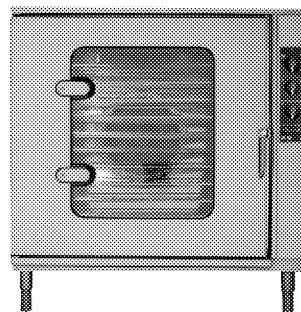
JOB NAME / NUMBER _____



-  INLET FOR
DESCALING SOLUTION
-  SAFETY VENT HOLE
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  **AGENCY APPROVALS:**
UL, NSF, CSA

SHIPPING WEIGHT:
517 Lbs./235 Kg.



SHORT FORM SPECIFICATION

Shall be CLEVELAND, CombiCraft®, Counter Type Multi-Purpose Oven, Model CCE-210X, ____ volts, 25 KW, ____ Hz, ____ phase. Cooking modes for: Hot Air Convection; Low and High Temperature Convection Steam; combination of Hot Air and Steam; variable Steam Exhaust Condensation Control; Butterfly Valve to regulate humidity exhaust; and Mechanical Controls.

MODEL CCE-210X 25 kW		ELECTRIC CONSUMPTION  (3 PH)	WATER  
208 VOLTS		480 VOLTS	35 PSI MIN., 60 PSI MAX.
LOAD IN HOT AIR MODE	24 kW	LOAD IN HOT AIR MODE	24 kW
LOAD FOR STEAM GENERATOR	22.5 kW	LOAD FOR STEAM GENERATOR	22.5 kW
LOAD IN COMBI MODE	22.5 kW	LOAD IN COMBI MODE	22.5 kW
MAX. LOAD	25 kW	MAX. LOAD	25 kW
FAN	1 kW	FAN	1 kW
TOTAL LOAD	70 AMPS	TOTAL LOAD	31 AMPS
RECOMMENDED BREAKER SIZE	90 AMPS	RECOMMENDED BREAKER SIZE	40 AMPS
		WATER CONSUMPTION	
		MAX. FOR STEAM PRODUCTION	= 7.9 Gal./Hr.
		AVERAGE FOR STEAM CONDENSER	= 8.5 Gal./Hr.
		TOTAL	= 16.4 Gal./Hr.

Cleveland Range reserves right of design improvement or modification, as warranted.

Cleveland Range, LLC
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Visit our Web Site at www.clevelandrange.com

CLEVELAND RANGE COMBI CCE X

SEQUENCE OF OPERATIONS

HOT AIR MODE

When using these instructions refer to the CCEX wiring schematic for appropriate model.

1. To turn the unit on, place the selector switch (B1) in the hot air mode.
 - Selector switch (B1) contacts A and 1 and contacts B and 2 close. Power is at the contacts of the three safety contactors (C6).
 - The power is sent through both of the motor thermal-protection contacts (A1 and A2), the chamber high limit (F2), and the boiler high limit (F3).
 - The relay board (SC) is then energized as well as the power pilot light (H1).
 - The coils of the safety contactors are energized sending power to the contacts of the clockwise contactor (CD), counter clockwise contactor (CS), chamber element contactor (C2), chamber power reducing contactor (C3), boiler element contactor (C4) and boiler power reducing contactor (C5).
2. When the door is closed, the door-switch (B3) closes.
 - The coil to the door switch relay (RM) is energized closing the contacts and sending power to the meat probe switch (IS).
3. When the meat probe (IS) is not selected the power is sent to the timer (B8).
4. With time on the timer the heat circuit is energized.
 - Power is sent to the timer indicator light (H1) and through the selector switch (B1) closed contacts D and 6 to the reversing switch (I).
5. The reversing switch (I) will energize either the clockwise contactor coil (CD) or the counter clockwise coil (CS).
 - In approximately 3 minutes it will energize the other coil, reversing the direction of the fan. The fan speed relay (RV) is energized at the same time the reversing switch (IS) has power.
6. With the fan speed switch set on high the high-speed contactor coil (CA) is energized and the (CA) contacts close, sending power to the fan motor (M) through the thermal protection (A1).
7. With the contactor (CA) closed, power is sent to both the damper system relay (RS) and the chamber thermostat (F1).
8. The heat circuit will remain at the chamber thermostat (F1) until no time is left on the timer and the buzzer (N) is energized.
9. If the meat probe (SS) is selected the heat circuit is controlled by the temperature set at the core temperature thermostat (indicated by the dotted lines).

10. When the temperature of the product is the same as entered, the buzzer (N) is energized shutting off the heat circuit.
11. While the heat circuit is energized through the timer (B8) or meat probe (SS) the chamber thermostat (F1) controls the circuit.
12. Until the chamber thermostat (F1) is satisfied, power will be sent to the heat indicator light (H1).
13. From the chamber thermostat (F1), power is also sent through contacts E and 7 on the selector switch (B1) to the coil of the chamber element contactor (C2) closing the contacts of the chamber element contactor (C2).
14. Power is also sent through the closed contacts G and 9 on the selector switch (B1), to the normally closed contacts of the boiler element contactor (C4).
 - From there power is sent to the closed contacts of the chamber contactor (C2), and the normally closed contacts of the low speed contactor (CB) to the coil of the chamber power reducer contactor (C3) closing the contacts and energizing the remaining air elements.

CLEVELAND RANGE COMBI CCE X

SEQUENCE OF OPERATIONS

STEAM MODE

When using these instructions refer to the CCEX wiring schematic for the appropriate model.

1. To turn the unit on, place the selector switch (B1) in the steam mode.
 - Selector switch (B1) contacts A and 1 and contacts B and 2 close. Power is at the contacts of the three safety contactors (C6).
 - The power is sent through both of the motor thermal-protection contacts (A1 and A2), the chamber high limit (F2), and the boiler high limit (F3).
 - The relay board (SC) is then energized as well as the power pilot light (H1).
 - The coils of the safety contactors are energized sending power to the contacts of the clockwise contactor (CD), counter clockwise contactor (CS), chamber element contactor (C2), chamber power reducing contactor (C3), boiler element contactor (C4) and boiler power reducing contactor (C5).
 - The cooling fan (M2) is energized and the system waits until either the door switch or the drain valve is closed.
2. Pressing the drain switch located on the front control panel closes the drain valve.
 - When the drain valve (V1) is closed, power is sent to the water level control (PL). At this time if the probes, located in the top of the generator, are not grounded, the fill solenoid valve (S2) is energized and the unit fills with water until the high probe is grounded.
 - While in use, the water level control (PL) will energize the fill solenoid valve (S2) whenever the water level drops below the high probe.
3. When the door is closed, the door-switch (B3) closes.
 - The coil to the door switch relay (RM) is energized closing the contacts (21 and 24) sending power to the meat probe switch (IS).
4. When the meat probe (IS) is not selected the power is sent to the timer (B8).
5. With time on the timer (B8), the fan circuit is energized.
 - Power is sent to the timer indicator light (H1) and through the selector switch (B1) closed contacts D and 6 to the reversing switch (I).
6. The reversing switch (I) will energize either the clockwise contactor coil (CD) or the counter clockwise coil (CS).
 - In approximately 3 minutes it will energize the other coil, reversing the direction of the fan. The fan speed relay (RV) is energized at the same time the reversing switch (IS) has power.

7. With the fan speed switch set on high the high-speed contactor coil (CA) is energized and the contacts (CA) close, sending power to the fan motor (M) through the thermal protection contacts (A1).
 - With the contactor (CA) closed, power is sent to both the damper system relay (RS) and the heat circuit through the chamber thermostat (F1).
 - The power will remain at the chamber thermostat (F1) until no time is left on the timer and the buzzer (N) is energized.
8. If the meat probe (SS) is selected the heat circuit is controlled by the temperature set at the core temperature thermostat (indicated by the dotted lines in the schematic).
 - When the temperature of the product is the same as entered, the buzzer (N) is energized shutting off the heat circuit.
9. While the heat circuit is energized through the timer (B8) or core temperature thermostat the chamber thermostat (F1) controls it.
10. With the chamber thermostat (F1) set, power is sent to the heat indicator light (H1) and the water level control (PL).
 - When water reaches the low probe and it is grounded, the water level control (PL) will send power to the steam thermostat (F4).
 - Until the steam thermostat (F4) is satisfied (149 degrees Fahrenheit at the vent pipe) power will be sent through the closed 9 and F contacts of the selector switch (B1) to the coil of the boiler element contactor (C4). This will close the contacts energizing the boiler element.
 - When the contacts of the boiler contactor (C4) close, power is sent through the closed contacts C and 3 of the selector switch (B1) to the coil of the boiler power reducer contactor (C5). This will close the contacts and energize the remaining elements.
 - The heat circuit will remain until the steam control thermostat (F4) or the chamber thermostat (F1) is satisfied.
11. The condensate solenoid (S5) is controlled by the condensate thermostat (F5).
 - When the temperature in the drain exceeds 158 degrees Fahrenheit it closes and the condensate solenoid (S5) is energized.

CLEVELAND RANGE COMBI CCE X

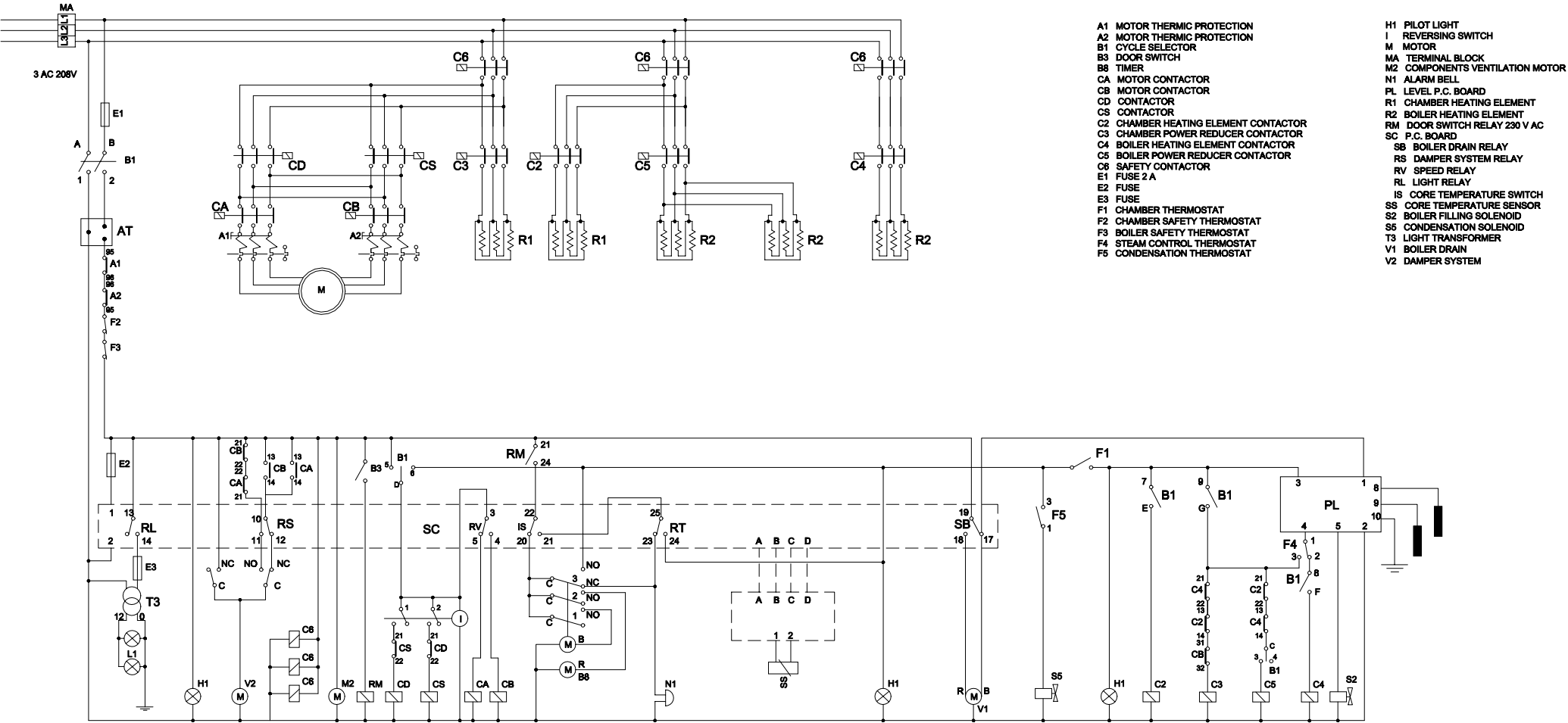
SEQUENCE OF OPERATIONS

COMBI MODE

When using these instructions refer to the CCEX wiring schematic for the appropriate model.

1. To turn the unit on, place the selector switch (B1) in the combi mode.
 - Selector switch (B1) contacts A and 1 and contacts B and 2 close. Power is at the contacts of the three safety contactors (C6).
 - The power is sent through both of the motor thermal-protection contacts (A1 and A2), the chamber high limit (F2), and the boiler high limit (F3).
 - The relay board (SC) is then energized as well as the power pilot light (H1).
 - The coils of the safety contactors are energized sending power to the contacts of the clockwise contactor (CD), counter clockwise contactor (CS), chamber element contactor (C2), chamber power reducing contactor (C3), boiler element contactor (C4) and boiler power reducing contactor (C5).
 - The cooling fan (M2) is energized and the system waits until either the door switch or the drain valve is closed.
2. Pressing the drain switch located on the front control panel closes the drain valve.
 - When the drain valve (V1) is closed, power is sent to the water level control (PL). At this time if the probes, located in the top of the generator, are not grounded, the fill solenoid valve (S2) is energized and the unit fills with water until the high probe is grounded.
 - While in use, the water level control (PL) will energize the fill solenoid valve (S2) whenever the water level drops below the high probe.
3. When the door is closed, the door-switch (B3) closes.
 - The coil to the door switch relay (RM) is energized closing the contacts (21 and 24) sending power to the meat probe switch (IS).
4. When the meat probe (IS) is not selected the power is sent to the timer (B8).
5. With time on the timer (B8), the fan circuit is energized.
 - Power is sent to the timer indicator light (H1) and through the selector switch (B1) closed contacts D and 6 to the reversing switch (I).
6. The reversing switch (I) will energize either the clockwise contactor coil (CD) or the counter clockwise coil (CS).
 - In approximately 3 minutes it will energize the other coil, reversing the direction of the fan. The fan speed relay (RV) is energized at the same time the reversing switch (IS) has power.

7. With the fan speed switch set on high the high-speed contactor coil (CA) is energized and the contacts (CA) close, sending power to the fan motor (M) through the thermal protection contacts (A1).
 - With the contactor (CA) closed, power is sent to both the damper system relay (RS) and the heat circuit through the chamber thermostat (F1).
 - The power will remain at the chamber thermostat (F1) until no time is left on the timer and the buzzer (N) is energized.
8. If the meat probe (SS) is selected the heat circuit is controlled by the temperature set at the core temperature thermostat (indicated by the dotted lines in the schematic).
 - When the temperature of the product is the same as entered, the buzzer (N) is energized shutting off the heat circuit.
9. While the heat circuit is energized through the timer (B8) or core temperature thermostat the chamber thermostat (F1) controls it.
 - With the chamber thermostat (F1) set, power is sent to the heat indicator light (H1) and the water level control (PL).
 - When water reaches the low probe and it is grounded, the water level control (PL) will send power to the steam thermostat (F4).
 - Until the steam thermostat (F4) is satisfied (149 degrees Fahrenheit at the vent pipe) power will be sent through the closed 9 and F contacts of the selector switch (B1) to the coil of the boiler element contactor (C4).
 - This will close the contacts of the boiler element contactor (C4) energizing the boiler element and opening contacts 21 and 22 preventing the chamber power reducer contactor (C3) from energizing while the boiler element contactor (C4) is energized.
 - When the contacts of the boiler contactor (C4) close, power is sent to the closed contacts C and 4 of the selector switch (B1) preventing the boiler power reducer contactor from energizing in the Combi mode.
 - The steam circuit will remain until the steam control thermostat (F4) or the chamber thermostat (F1) is satisfied
10. While the chamber thermostat (F1) is closed, power is sent through the closed contacts E and 7 of the selector switch (B1) to the coil of the chamber element contactor. This will close the contacts energizing the chamber element (R1).
 - When the steam thermostat (F4) is satisfied contacts 1 and 2 open and contacts 1 and 3 close. This removes the power from the coil of boiler element contactor (C4) and sends power to the normally closed contacts 21 and 22 on the boiler element contactor (C4).
 - With the chamber element contactor (C2) energized, power is sent through the contacts 13 and 14 and the normally closed contacts of the low speed contactor (CB) to the coil of the chamber power-reducer contactor (C3) energizing the remaining elements.
 - The heat circuit will remain energized until the chamber thermostat (F1) is satisfied.
11. The condensate solenoid (S5) is controlled by the condensate thermostat (F5).
 - When the temperature in the drain exceeds 158 degrees Fahrenheit it closes and the condensate solenoid (S5) is energized.

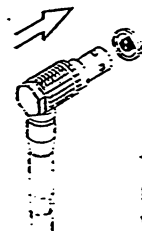
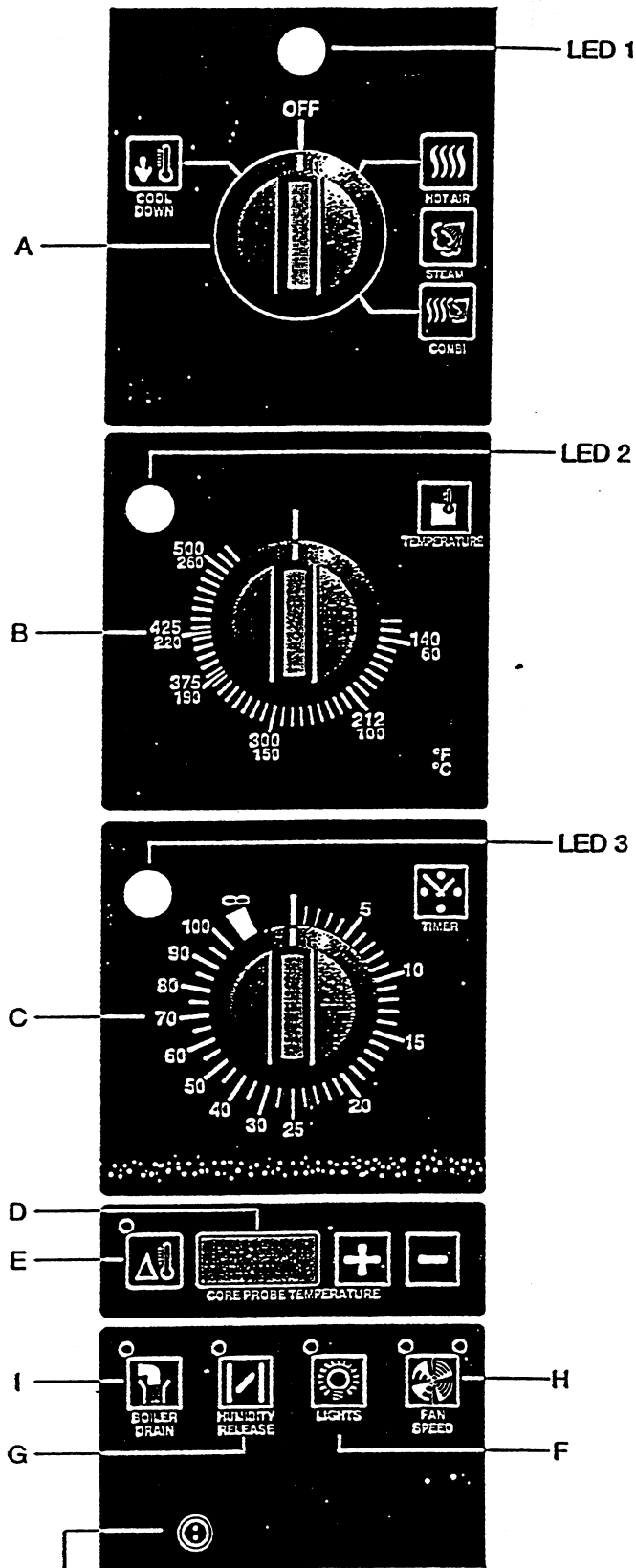


- A1 MOTOR THERMIC PROTECTION
- A2 MOTOR THERMIC PROTECTION
- B1 CYCLE SELECTOR
- B3 DOOR SWITCH
- B8 TIMER
- CA MOTOR CONTACTOR
- CB MOTOR CONTACTOR
- CD CONTACTOR
- CS CONTACTOR
- C2 CHAMBER HEATING ELEMENT CONTACTOR
- C3 CHAMBER POWER REDUCER CONTACTOR
- C4 BOILER HEATING ELEMENT CONTACTOR
- C5 BOILER POWER REDUCER CONTACTOR
- C6 SAFETY CONTACTOR
- E1 FUSE 2 A
- E2 FUSE
- E3 FUSE
- F1 CHAMBER THERMOSTAT
- F2 CHAMBER SAFETY THERMOSTAT
- F3 BOILER SAFETY THERMOSTAT
- F4 STEAM CONTROL THERMOSTAT
- F5 CONDENSATION THERMOSTAT
- H1 PILOT LIGHT
- I REVERSING SWITCH
- M MOTOR
- MA TERMINAL BLOCK
- M2 COMPONENTS VENTILATION MOTOR
- N1 ALARM BELL
- PL LEVEL P.C. BOARD
- R1 CHAMBER HEATING ELEMENT
- R2 BOILER HEATING ELEMENT
- RM DOOR SWITCH RELAY 230 V AC
- SC P.C. BOARD
- SB BOILER DRAIN RELAY
- RS DAMPER SYSTEM RELAY
- RV SPEED RELAY
- RL LIGHT RELAY
- IS CORE TEMPERATURE SWITCH
- SS CORE TEMPERATURE SENSOR
- S2 BOILER FILLING SOLENOID
- S5 CONDENSATION SOLENOID
- T3 CONDENSATION TRANSFORMER
- V1 BOILER DRAIN
- V2 DAMPER SYSTEM

COMBI	●	●	●	●	●	●	●	●
STEAM	●	●	●	●	●	●	●	●
HOT AIR	●	●	●	●	●	●	●	●
O	●	●	●	●	●	●	●	●
COOL	●	●	●	●	●	●	●	●
	1	2	3	4	5	6	7	8
	A	B	C	D	E	F	G	

ITEM	QTY	PART NO.	DESCRIPTION
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TOLERANCES DIMENSIONS UNLESS NOTED	DO NOT SCALE	DRAWN BY	DATE
DECIMAL ±.030	TITLE		
ANGULAR ±1°	SIZE D	DRAWING NO.	

DESCRIPTION OF CONTROLS AND OPERATION / 1 - MODELS M, X



TEMPERATURE MEAT PROBE CONNECTION

Fit the temperature meat probe as shown.

Wrong connection will damage the temperature meat probe joints.

Figure 3-2

