OWNERS MANUAL
INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

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ICVE-1 & ICVE-2
ELECTRIC CONVECTION OVENS

All Imperial Mfg. Co. equipment is manufactured for use with the type of gas or electrical rating as specified on the rating plate and for installation in accordance with ANSI Z223.1/NFPA 54 (latest edition) of the National Fuel Gas Code and NFPA-70- (latest edition). Copies may be obtained from the American Gas Association, 1515 Wilson Blvd., Arlington, VA 22209.

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 or servicing this equipment.

FOR YOUR SAFETY

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

Instructions to be followed in case the user smells gas are to be posted in a prominent location in the kitchen area. This information shall be obtained by contacting the local gas company or gas supplier.

PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE.

IMPORTANT

Safe and satisfactory operation of your equipment depends to a great extent on its proper installation. Installation must conform to local codes, or in the absence of local codes, with the National Fuel Code, ANSI Z-223.1/NFPA54 (latest edition.). In Canada, installation should conform to installation codes for gas burning appliances and equipment standard CAN1-B149.1 (natural gas) or CAN1-B149.2 (propane gas).

Electrical wiring from the electric meter, main control box or service outlet to appliance must be electrically grounded in accordance with local codes, or in the absence of service of local codes, with the National Electrical Code ANSI/NFPA 70 - (latest edition). In Canada, conform with Canadian Electrical Code CSA-C22.1

IMPORTANT: Installing, Operating and Service Personnel:

Installation of the equipment should be performed by qualified, certified, licensed and/or authorized personnel who are familiar with and experienced in state/local installation codes.
Operation of the equipment should be performed by qualified or authorized personnel who have read this manual and are familiar with the functions of the equipment.
Service of the equipment should be performed by qualified personnel who are knowledgeable with Imperial Ranges.

SHIPPING DAMAGE CLAIM PROCEDURE

The equipment is inspected & crated carefully by skilled personnel before leaving factory. The transportation company assumes full responsibility for safe delivery upon acceptance of this equipment. If shipment arrives damaged:
1. Visible loss or damage: Note on freight bill or express delivery and have signed by person making delivery.
2. File claim for damages immediately: Regardless of extent of damages.
3. Concealed loss or damage: If damage is noticed after unpacking, notify transportation company immediately and file "Concealed Damage" claim with them. This should be done within fifteen (15) days from date delivery is made to you. Retain container for inspection.

GENERAL

The ICVE - Series Electric Convection Ovens feature a 500^{0}F thermostat, timer, porcelain interior and a two-speed, 1/2 HP blower motor as standard equipment. Ovens equipped with standard voltages are 208 or 240 V, 60 Hz, single- or three- phase. Ovens equipped for 480 V, 60 Hz, single- or three-phase electrical specifications are optional.

The ICVE - Series Oven is a single cavity oven furnished with five racks. The ovens that have simultaneously opening doors with chain mechanism above are standard; independently opening doors are optional. Oven lights with on-off switch are standard on all models.

An open stand with lower storage rack is available as an option.

Stacked ovens are furnished with either Stacking Kit using (8"LEGS) or Stacking Kit using (CASTERS) for mounting one oven on top of the other.

Additional racks are available as accessories.

INSTALLATION

UNPACKING

Immediately after unpacking the oven, check for possible shipping damage. If the oven is found to be damaged, follow the shipping damage claim procedure.

Prior to installation, verify that the electrical service agrees with the specifications on the oven data plate, located in front of the oven below the oven section.

LOCATION

The installation location must allow adequate clearances for servicing and proper operation. For solid state and digitally controlled models, there must be 18" (45 cm) of clearance on the right side of the oven from any open flame.

INSTALLATION CODES AND STANDARDS

In the United States, install the oven in accordance with: 1) State and local codes; 2) National Electrical Code, NFPA-70 (latest edition); and 3) NFPA Standard #96, Vapor Removal from Cooking Equipment (latest edition), available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada, install the oven in accordance with: 1) Local codes; 2) Canadian Electrical Code, CSA Standard C22.2 No. 1 (latest edition) and 3) Canadian Standard for Commerical Cooking Equipment, CSA Standard C22.2 No. 109 (latest edition).

INSTALLING BASIC OVEN

The basic oven must be installed on legs or mounted on a modular stand. Installations on concrete bases or other supports restricting air circulation underneath the oven is not advisable and may void the warranty. If using the modular stand, set the oven on the stand after unpacking.

CLEARANCES:

The appliance area must be kept free and clear of all combustibles. This unit is design-certified for the following installations only:
The clearances from **combustible** and **noncombustible** construction are as follows:

	Combustible	Noncombustible
Back	6"	0
Sides	6"	0

DO NOT MOUNT oven on a curb base. Use legs/casters provided. Adequate air space at the bottom and rear of the unit must be provided for proper venting of the blower motor.

ASSEMBLY:

DO NOT USE door to lift or move oven!!! All ovens must be installed on leg assembly or casters shipped with the unit. The leg/stand assembly pans or casters are shipped separately.

SINGLE OVEN ICVE-1:

Assemble the leg/stand assembly as follows:

1. Remove legs from the package.
2. Secure top frame pans to the legs with bolts provided (long angle - front & back. Short angle - sides) REF: figure 1.
3. Place oven on top of leg/stand assembly. Match holes on the frame with oven bottom base. Fasten with bolts provided.

If provided with optional bottom shelf and rack support: (Ref: figure 1)

a. Screw the bottom shelf to the legs.
b. Screw rack guide support angles to bottom shelf & top leg frame.

DOUBLE OVEN ICVE-2:

6" leg assembly is provided.

1. Match holes on the legs with oven bottom base and screw with bolts provided.
2. Set top oven on top of bottom oven.
3. Bolt down at rear and front as shown in figure 2. Remove top kick plate to access screwing the front bolts.
4. Assemble bottom flue extension as shown in figure 3.

CASTER INSTALLATION:

If casters are provided, match holes on the caster with holes on the oven bottom base and fasten with bolts provided.
NOTE: Front casters are locking type.

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE ANSI/NFPA70 (LATEST EDITION) AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE THAT YOU ARE WORKING ON THE CIRCUIT.

A terminal block is provided on the back of the appliance for connecting to the power supply.

Follow the electrical schematic diagram located on the rear panel of the appliance when making connections to the supply lines.

ELECTRICAL DATA

	TOTAL KW	208-240V 3-PHASE LOADING			480 V 3-PHASE LOADING			NOMINAL AMPERES PER LINE WIRE											
		KW PER PHASE			KW PER PHASE			3-PHASE									1-PHASE		
								208 V			240 V			480 V			209 V	240 V	480 V
		L-1-L-2	L-2-L-3	L-1-L-3	L-1-L-2	L-2-L-3	L-1-L-3	L1	L2	L3	L1	L2	L3	L1	L2	L3			
Single Oven	10	4	4	4.5	4	4	4.5	35	33	35	33	29	33	14.4	15.3	15.3	60	52	26
Stacked Oven	20	8	8	9	8	8	9	70	66	70	66	58	66	28.8	30.6	30.6	120	104	52

ELECTRICAL CONNECTIONS (Stacked Ovens)

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

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE THAT YOU ARE WORKING ON THE CIRCUIT.

Make sure that the electrical power supply agrees with the specifications on the oven data plate, the wiring diagram on the oven and Electrical Data. page 2.

Each oven is supplied with a separate terminal block provided on the back of the appliance. Connections to the supply lines is the same as described for the single oven. Refer to reference drawing supplied with stacking kit for electrical connection instructions.

LEVELING:

A carpenter's spirit level should be placed on the oven's center baking rack and the unit leveled both front-to-back and side-to-side. If it is not level, cakes, casseroles, and other liquid or semi-liquid batter will not bake evenly, burner combustion may be erratic, and the unit will not function efficiently.

If the floor is relatively smooth and level, the unit may be further leveled with adjustment in the foot of the leg. Adjust to the high corner and level the unit with metal shims if the adjustment required exceeds the 1-1/4" adjustment available. Units with casters must be leveled with shims. A unit will probably not return to the same position after being moved, requiring re-leveling after each move.

AIR SUPPLY & VENTILATION:

The area in front of, around, and above the appliance must be kept clear to avoid any obstruction of the flow of combustion and ventilation air. Adequate clearance must be maintained at all times in front and at the sides of the appliances for servicing and proper operation.

Means must be provided for any commercial, heavy-duty cooking appliance to exhaust combustion waste products to the outside of the building. Usual practice is to place the unit under an exhaust hood. Filters and drip troughs should be part of any industrial hood, but consult local codes before constructing and installing a hood.

Strong exhaust fans in this hood or in the overall air conditioning system can produce a slight vacuum in the room and/or cause air drafts, either of which can interfere with pilot or burner performance and can also be hard to diagnose. Air movement should be checked during installation; if pilot or burner outage problems persist, make-up air openings or baffles may have to be provided in the room.

FINAL PREPARATION:

On initial installation, turn the oven to 250 degrees and operate for about 1 hour, then reset the thermostat to its maximum and operate for another hour. This will drive off any solvents remaining in the unit. At the end of this second hour, turn the thermostat OFF, open the door and allow the unit to cool. Oven should then be thoroughly washed using hot, soapy water before being used.

OPERATING LIGHTING INSTRUCTIONS:

Preheating

1. Turn POWER SWITCH to ON. Motor will come on, indicating that power to oven is on.
2. Set Thermostat to desired temperature. The red light comes on indicating calling for heat.
3. Prepare product and place in suitable pans. When RED HEAT light goes off, oven has reached desired preheat temperature.

Cooking

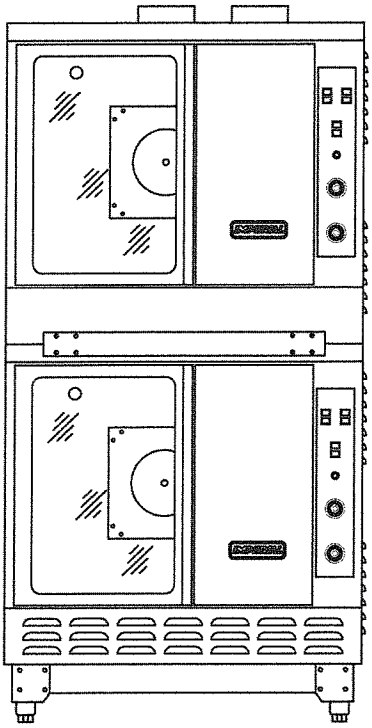
1. Open doors and load the product into the oven. Place pans in the center of the racks. Close doors.
2. Set the Timer. After the preset time lapses, turn TIMER to OFF position to stop alarm.
3. When product is done, open doors and carefully remove cooked product from the oven. Care should be taken when wiping up any spills, as oven is still hot.

End of Day

1. Turn Thermostat to OFF.
2. Turn POWER SWITCH to COOL DOWN. Leave doors open while the fan is on to cool the oven.
3. When oven has cooled sufficiently, turn POWER SWITCH to OFF and clean the oven.

MODEL: ICVM
NEXT ASSY: –

TITLE
ICV-2 STACKING KIT



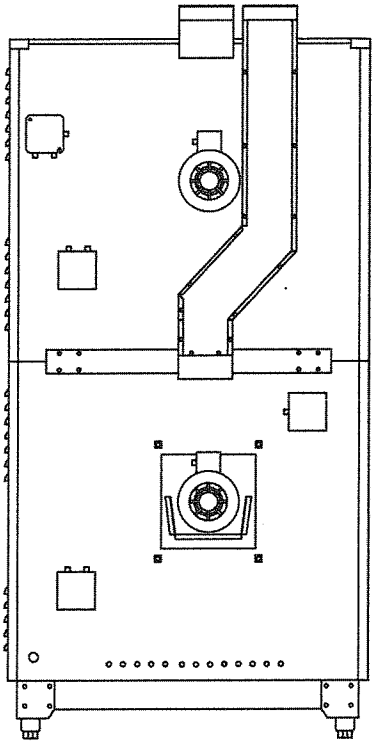


FIGURE 2

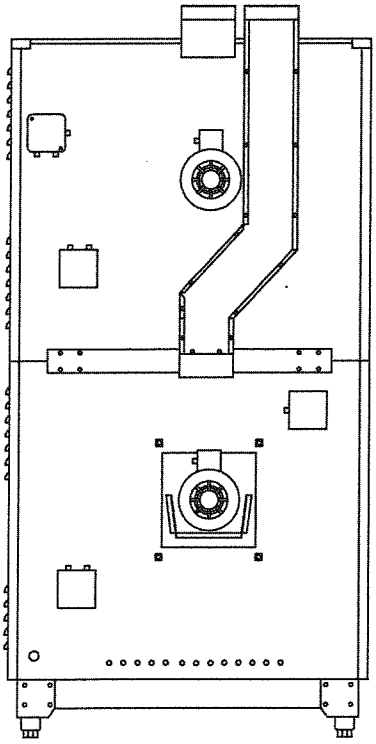


FIGURE 3

CLEANING AND MAINTENANCE:

Any piece of equipment works better and lasts longer when maintained properly. Cooking equipment is no exception. Your Imperial oven must be kept clean during the working day and thoroughly cleaned at the end of the day.

CAUTION: NEVER USE AMMONIA IN AN OVEN THAT IS WARMER THAN ROOM TEMPERATURE AND ALWAYS HAVE DIRECT VENTILATION!

DAILY: OVENS:

1. Remove the baking racks. Wash in hot soapy water, and replace after the rest of the oven is cleaned.
2. Scrape off any food particles with a nylon griddle scraper. Be very careful about scratching the porcelain finish on the oven liner panels.
3. Wash all the above with hot soapy water, then reassemble.
4. Baked on spills may be loosened and stubborn stains removed with ordinary household ammonia and scrubbing with a nylon pad in a cold oven only.
5. Do not allow spray type oven cleaners to come into contact with the temperature probe in the oven.
6. After cleaning the oven, rinse well with 1/4 cup of vinegar to one quart of clear water solution to neutralize any caustic residue of the cleaning compound. Wipe dry.
7. To increase the life of the motor, follow these instructions:
   (a) Never run oven with motor off.
   (b) After you finish cooking and the oven is not to be used for more than a 1/2 hour. Place the toggle switch to the "COOL DOWN" position and open the door. When oven temperature is equal to room temperature, turn unit off.

PERIODIC CLEANING:

Check the ventilation system periodically to see that nothing has fallen down into the exhaust vents.

Lubricate the pivot pins of the oven door hinge. Use a multi-purpose lubricating oil sparingly so as to not drip oil needlessly.

Your appliance should be checked for safe and efficient operation at least yearly by a qualified service company.

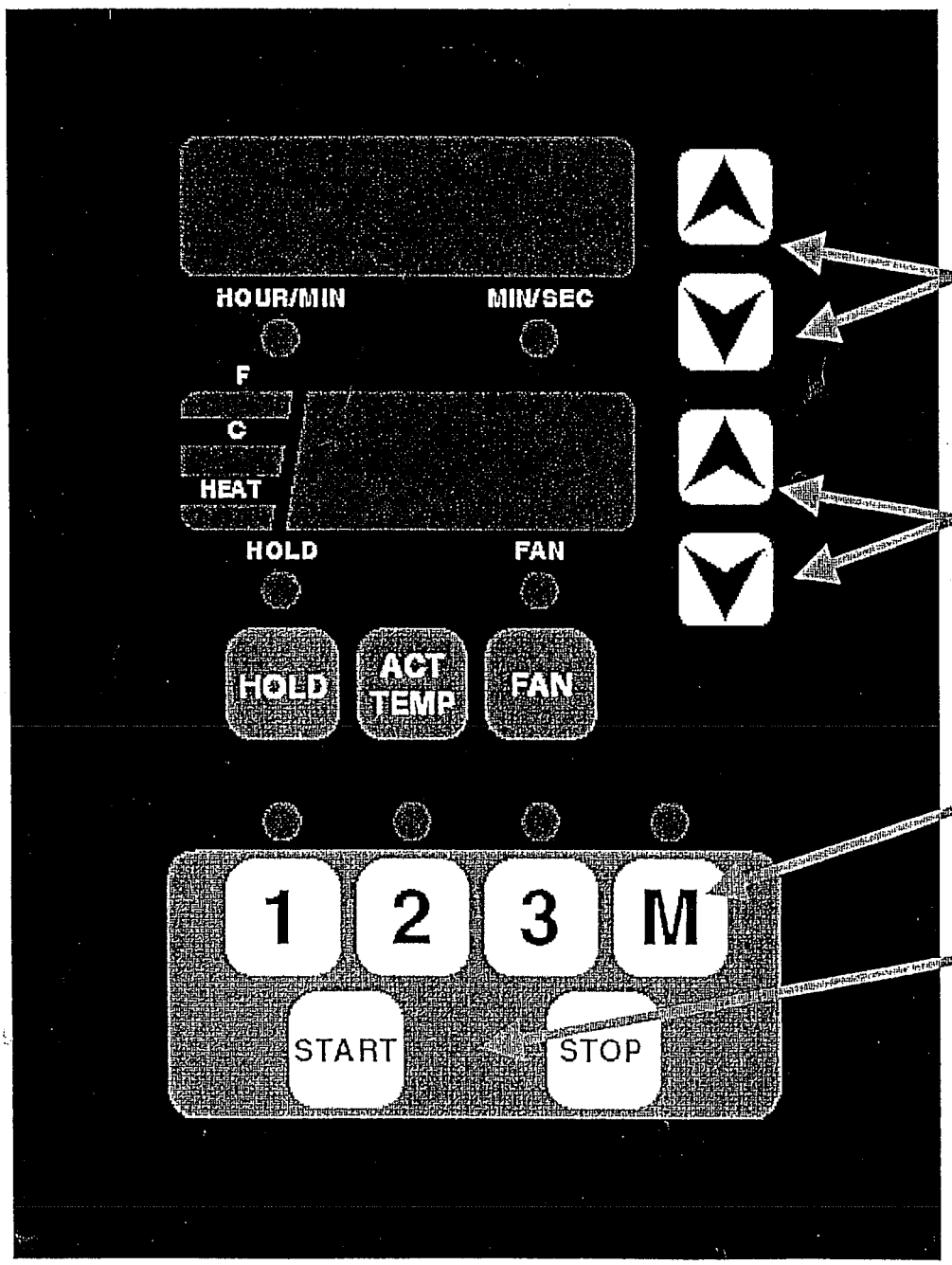
STAINLESS STEEL:

All stainless steel body parts should be wiped regularly with hot soapy water during the day and with a liquid cleaner designed for this material at the end of each day. DO NOT USE steel wool, abrasive cloths, cleansers or powders to clean stainless surfaces! If it is necessary to scrape stainless steel to remove encrusted materials, soak in hot water to loosen the material, then use a wood or nylon scraper. DO NOT USE a metal knife, spatula, or any other metal tool to scrape stainless steel! Scratches are almost impossible to remove.

TIPS ON USING IMPERIAL CONVECTION OVEN

1. In general, reduce temperature 50° from conventional recipe.
   a. Bakery products, reduce temperature 50° and time 25 to 33% less.
   b. Casserole cookery, reduce temperature about 50° and time 25 to 50%.
   c. Meat roasting, reduce temperature to 275° - 300°. Use meat thermometer. Cooking time may be reduced up to 50%.
2. Use fan for preheating and baking.
3. Check product at 1/2 stated time of regular recipe.
4. Level pans bake more evenly; warped pans will give uneven baking results.

Programmable Oven Control



For technical support questions, Call 1-800-243-9271

(FAST.)®

Programmable Oven Control

Features	Benefits
Solid State Electronics	• No moving parts; high reliability • Within 2 degrees of setpoint • Modulates heat vs. on/off • Never needs calibration • Probe diagnostics
SmartStat™ Precise Temp Control	• Superior food quality/consistency • No overshoot; energy savings • Increased yield & product hold time
3 Programmable Product Keys	• Consistency from batch to batch • Audible alarms alert operator • Labor savings; simplified training
Manual Product Key	• Alter programming during the cycle • Ultimate flexibility
Large LED Displays	• Separate displays for time & temp • Across the kitchen status checking of time/temp simultaneously • Displays in Fahrenheit or Celsius
Easy to Program/Use	• Interrupt logic automatically stops cook cycle when oven door is opened • Actual temp. key

For technical support questions, Call 1-800-243-9271

(FAST.)®

Programmable Oven Control

Cook & Hold controller with four product keys, one of which is shown as "M" for manual (can altered on the fly)

- Operated in 3 modes:
  - Normal/Idle
  - Cook Mode
  - Hold Mode
- Cook temp range 150 - 550 F
- Hold temp range 140 - 200 F
- Hidden program key (between the "Start" and "Stop" buttons)

(FAST.)®

Programmable Oven Control

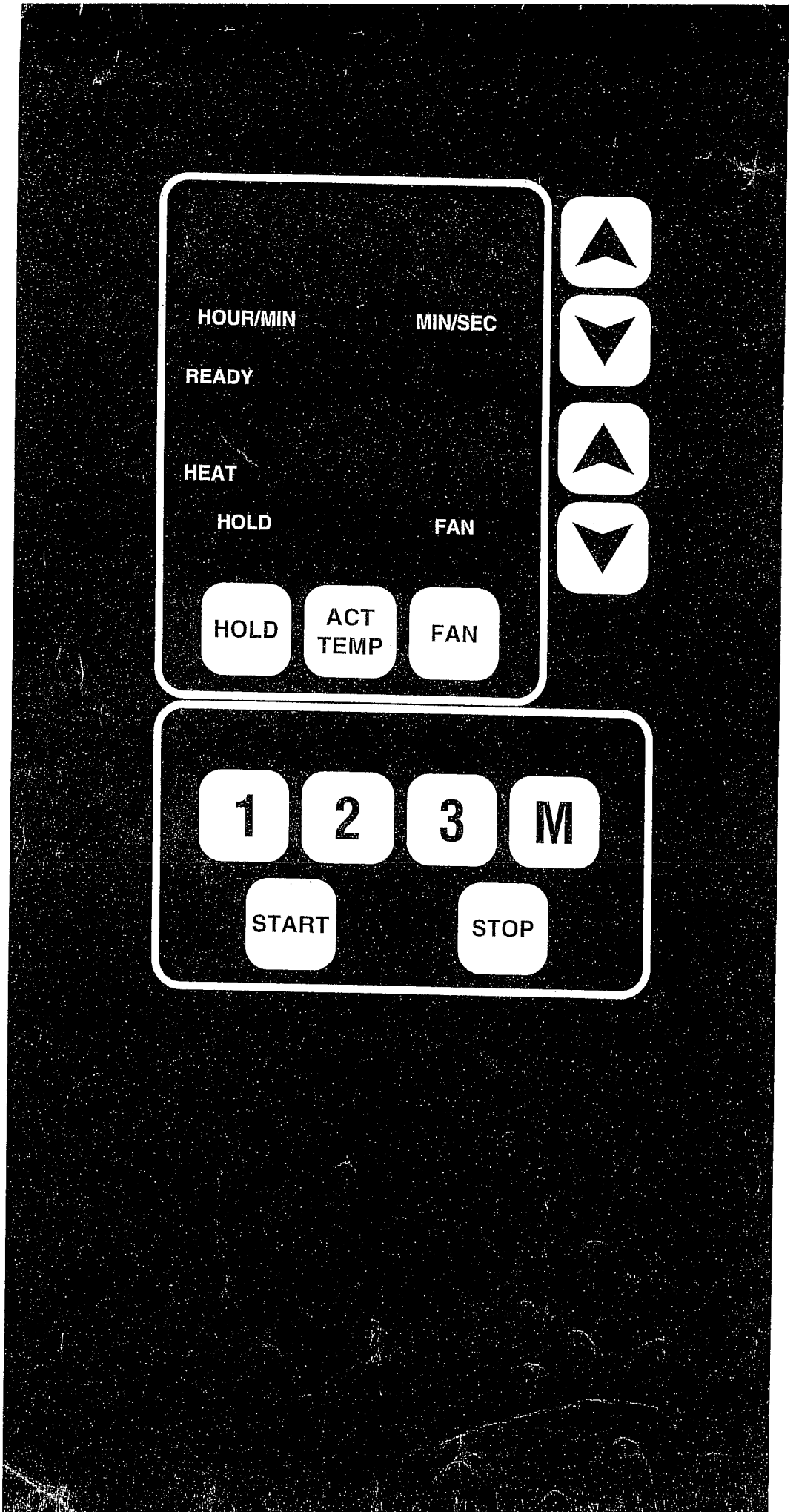
Most mechanical thermostats are off by 25 - 50 degrees!

- Moving parts unreliable
- Poor accuracy; large temperature swing
- Slow temperature response time

- Why Electronic Oven Controls?
  - Precise time/temp control
    - Better food quality & consistency
    - Energy efficiency
    - Food safety
  - Pre-programmed recipes
    - Consistency from batch to batch
    - Labor savings
    - One key touch for multi-stage recipes (cook product and then automatically hold)

For technical support questions, Call 1-800-243-9271

(FAST.)®


HOUR/MIN
MIN/SEC
READY
HEAT
HOLD
FAN
HOLD
ACT TEMP
FAN
1
2
3
M
START
STOP

COOK & HOLD OPERATING INSTRUCTIONS

There are 3 pre-settable times and temperatures, and one manual time. The timing range of all keys is from :01 second to 99 hours (automatically switches from min/sec. to hour/min). Each key is also programmable for one hold time and a three-position fan (on/pulse/off).

In normal operating mode, the light (LED) below the temperature display (F or C) and the display will be flashing when the temperature is below the set temperature. The display will flash until set and actual temperature are equal.

Once set and actual temperatures are equal, key 1, 2, 3 or M may be pressed. The light above the corresponding key will be lit. Pressing the START key will begin a flex time countdown (time is compensating) depending on temperature.

COOK & HOLD - STARTING THE COOK CYCLE

To start a cook cycle, simply press the product key for the product you wish to cook. If the product key is programmed, the correct cooking time will be displayed **12:00** (example). Press the START key and the time will immediately start to count down in minutes and seconds. If **:00** is displayed immediately and the unit starts to signal, the key being operated is not programmed. If correctly programmed, it will count down to **:00**. When zero is reached, the light above the product key will be flashing, the controller will emit an audible alarm and immediately begin counting up (if programmed for a hold time).

Cancel this alarm by pressing the STOP key; controller will continue to count up.

COOK & HOLD - HOLDING TIMERS

If the unit is programmed with a holding time, the holding time will automatically start counting upon expiration of the cooking cycle.

When there is an active hold time, the HOLD indicator will be lit and the light above the product key with the hold time will be flashing.

To cancel, press the STOP key.

COOK & HOLD DISPLAY DESCRIPTIONS

320 EXAMPLE — The unit is in the Operating Mode. The actual temperature is shown in the display and is within 20 degrees of the programmed temperature.

350 EXAMPLE — The unit is in the Operating Mode. The actual temperature will flash in the display and is more than 20 degrees below the programmed temperature range.

620 EXAMPLE — The unit is in the Operating Mode. The actual temperature is more than 600 degrees or the probe is defective.

:00 — The unit is in the Operating Mode. The flashing display signifies a cook cycle has just completed.

000 — The probe has malfunctioned.

COOK & HOLD CONTROLLER FEATURES

FAHRENHEIT OR CELSIUS TEMPERATURE DISPLAY

The operator will have the ability to configure the controller to display the temperature in degrees Fahrenheit or Celsius from the jumper on the back of the circuit board (J3). If the jumper is ON the controller is in Celsius mode; if OFF, the controller is in Fahrenheit mode.

PROGRAMMABLE TIMES

The operator will have the ability to program the cook times for each product key. The controller is programmable in minutes (up to 59) and seconds (up to 59), then hours (up to 99).

PROGRAMMABLE TEMPERATURES

The operator will be able to program cook temperatures for each product key. The valid temperature range is 150 to 550°F (66 to 288°C). Jumper J3 on back of circuit board controls the temperature mode selection.

PROGRAMMABLE HOLD

The operator will be able to program each product key for a counting hold time and temperature (140 to 200°F/ 60 to 94°C) or disable the hold mode. **LED ON** = hold mode enabled **LED OFF** = hold mode disabled

PROGRAMMABLE FAN

The operator will be able to program each product key for one of three fan modes.

LED ON = Fan always ON **LED Flashing** = Fan pulsed **LED OFF** = Fan always OFF

FLASHING DISPLAY

The temperature display will flash after every product key is pressed. The display will continue to flash until the actual temperature is within 20° of set temperature.

PROGRAMMING THE COOK & HOLD CONTROLLER

The following steps are needed to enter and program each of the product buttons. Please note that you must follow each of the steps below for each product button. **NOTE:** The manual "M" key allows you to temporarily change the set temperature and time and will reset to the original programming parameters after you are done cooking. This key is programmed the same as keys 1, 2 and 3 except that programming mode does not have to be entered to do it. However, you can still manually program the controller while in programming mode.

ACTION	RESULT
Press the product button you want to program.	The corresponding LED will light above the selected product key.
Enter the programming mode by pressing and holding the area between the START & STOP buttons until the light above the product button starts flashing.	You have successfully entered the programming mode.
To set the cooking time, press the up or down arrow key to the right of the time display.	The longer you press the button, the faster the display will change.
To set the cooking temperature, press the up or down arrow key to the right of the temperature display.	The longer you press the button, the faster the display will change.
To select the hold feature and set the holding temperature, press and hold the "HOLD" button, then use the up or down arrow to the right of the temperature display to select your holding temperature.	This will activate the holding feature and set the holding temperature. Note: the lite above the HOLD button will be on if you set the hold feature correctly.
To select the fan operation, press the "FAN" button until the operation you want is displayed.	1) The lite above the "FAN" button is on, the fan will be on when the door is closed. 2) The lite above the "FAN" button is flashing, the fan will only be on when the heat goes on. 3) The lite above the "FAN" button is off, the fan has been turned off.
To exit the programming mode, press the space between the START & STOP buttons.	The product button lite will go to steady on.

OPERATING THE COOK & HOLD CONTROLLER

ACTION	RESULT
Press the product key you want to use.	The temperature display will flash until the oven is at the correct temperature. When the oven reaches the correct set temperature, the temperature display will stop flashing.
To start a cooking, press the START button	The timer will start to count down.
To stop the cooking cycle during the cooking mode, press the STOP button	The display will automatically return to the original time and temperature programmed in.
To turn off the alarm when the cooking cycle has been completed, press the STOP button	The display will automatically show the holding temperature programmed and the timer will start counting up.
To cancel the hold timer, press the STOP button and the display will automatically return to the original time and temperature programmed in.	You are ready to start cooking again.