

# Built-In Electric Combination Oven

## Installation manual

NQ70M6650D\*/NQ70M7770D\*



**SAMSUNG**

## Contents

<b>Safety informations</b>	<b>2</b>
Related equipment safety	2
Transport	2
<b>Preparation</b>	<b>4</b>
Checklist	4
Prepare to install the oven	4
Location requirements	5
Product dimensions - Combi. ovens	5
Cabinet dimensions - Combi. ovens	6
<b>Installation instructions</b>	<b>8</b>
Prepare built-in oven	8
Remove and replace oven door	8
Electrical connection	10
Install oven	12
<b>Self-diagnosis</b>	<b>14</b>
Temp sensor & Heater check	14
<b>Troubleshooting</b>	<b>15</b>
Information codes	15

## Safety informations

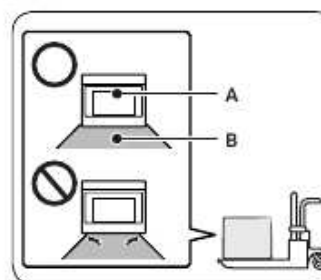
### Related equipment safety

Remove all tape and packaging before using the appliance. Dispose of the packaging after unpacking the appliance. Never allow children to play with packaging material.

Never modify or alter the construction of the appliance. For example, do not remove panels, wire covers or screws.

### Transport

To avoid damage to the oven vent, use the transport method shown in the picture below.



- A. Front
- B. Pallet

Support the bottom of the oven from either side when moving it into the installation location. Leave the unit attached to the shipping pallet until it is in front of the cabinet opening and is ready to be lifted into place.

### **⚠ DANGER**

#### **ELECTRICAL SHOCK HAZARD**

To avoid risk of electrical shock, personal injury or death; verify your appliance has been properly grounded in accordance with local codes or in absence of codes, with the National Electrical Code (NEC). ANSI/NFPA 70-latest edition.

### **⚠ WARNING**

#### **MOVING HAZARD**

To avoid risk of severe personal injury; this appliance requires two or more people while handling and moving. Use of appliance moving devices is recommended.



#### **⚠ WARNING**

- The information in this manual should be followed exactly.
  - A fire or electrical shock may result causing property damage, personal injury or death.
- Important - Save this installation manual for local electrical inspector's use.
- Proper Installation - Be sure your appliance is properly installed and grounded by a qualified technician.
- New branch-circuit installations (1996 NEC), mobile homes, recreational vehicles, or installations where local codes prohibit grounding through the neutral conductor require 4-wire branch-circuit connection.
- Improper connection of aluminum house wiring to copper leads can result in an electrical hazard or fire. Use only connectors designed for joining copper to aluminum and follow the manufacturer's recommended procedure closely.
- Mounting screws must be used.
  - Failure to do so can result in the oven falling out of the cabinet causing serious injury.

#### **⚠ CAUTION**

- Make sure the cabinets and wall coverings around the oven can withstand the temperature (up to 194 °F [90 °C]) generated by the oven.
  - Discoloration, delamination or melting may occur.
- DO NOT remove spacers on the side walls of the built-in oven.
  - These spacers center the oven in the space provided. The oven must be centered to prevent excess heat buildup that may result in heat damage or fire.

#### **⚠ WARNING**

- The information in this manual should be followed exactly.
  - A fire or electrical shock may result causing property damage, personal injury or death.

#### **IMPORTANT NOTE**

Proper installation is the responsibility of the installer and product failure due to improper installation is NOT covered under warranty.

#### **⚠ WARNING**

- DO NOT put any weight on the oven door. Never allow anyone to climb, sit, stand or hang on the oven door.
  - The oven could tip and injury might result from food or the oven itself.

#### **⚠ WARNING**

- The electrical power must be shut off while the electrical connections are being made.
  - Failure to do so can result in severe personal injury, death or electrical shock.

#### **IMPORTANT NOTE**

- Observe all governing codes and ordinances. This appliance must be properly grounded.
- Keep oven vent ducts unobstructed. The oven vent is located bottom of the oven. This area could become hot during oven use. Never block this vent or place plastic or heat-sensitive items in front of it.



## Preparation

### Checklist

Use this checklist to verify that you have completed each step of the installation process. This can help you avoid mistakes.

1. Before installing the oven, be sure to verify the cabinet dimensions are correct for your unit and the required electrical connections are present.
2. Refer to the installation manual for content regarding Safety, Cabinet Dimensions, Removing Packaging, Electrical Installation, Testing the Installation and Customer Service.
3. To lift up the oven, hang the install handle onto the side hook of the unit.
4. Move the oven unit into place in front of the cabinet opening, leaving the bottom packaging on the unit to avoid damaging flooring.
5. Team lift the unit directly into the cabinet cutout taking care not to pinch fingers or scratch hands or arms. Make sure the electrical conduit reaches to the connection point properly.
6. Slide the unit all the way into place, making sure to route the electrical conduit correctly.
7. Fasten the oven unit to the cabinetry opening with screws supplied (using Phillips screwdriver).
8. Consult the complete installation instructions and follow the remainder of the procedures listed, including performing an operation test.
9. All product literature and accessories are supplied (may be wrapped or boxed) with the oven.
10. INSTALLER - Leave the literature pack and the accessories with the customer.

### Prepare to install the oven



Phillips Screwdriver



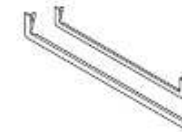
Drill

### Prepare to install the oven



8 screws (M4 L16)

8 Wood Screws For Mounting (6 screws needed for installation and 2 extra's)



30" (76.2 cm)  
Metal Bottom Trim

### Materials needed



Junction Box



Wire Nuts



$\frac{3}{4}$ " Conduit Connector

## Location requirements

**IMPORTANT:** Observe all governing codes and ordinances.

- Cabinet opening dimensions that are shown must be used. Given dimensions provide minimum clearance with oven.
- Recessed installation area must provide complete enclosure around the recessed portion of the oven.
- Grounded electrical supply is required. See "Electrical connection" section.
- Electrical supply junction box should be located 3" (7.6 cm) maximum below the support surface when the oven is installed in a wall cabinet. A 1" (2.5 cm) minimum diameter hole should have been drilled in the right rear or left rear corner of the support surface to pass the appliance cable through to the junction box.

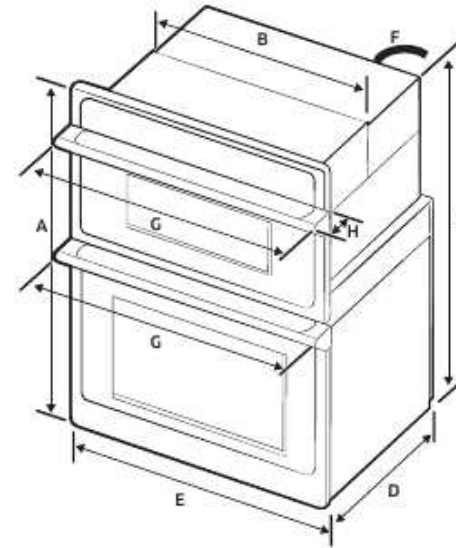
### NOTE

For under counter installation, it is recommended that the junction box be located in the adjacent right or left cabinet. If you are installing the junction box on rear wall behind oven, it is recommended that the junction box be recessed and located in the upper Right of the cabinet.

- Oven support surface must be solid, level and flush with bottom of cabinet cutout.
- Floor must be able to support a Combi. oven weight of 287 lb (130 kg).

**IMPORTANT:** To avoid damage to your cabinets, check with your builder or cabinet supplier to make sure that the materials used will not discolor, delaminate or sustain other damage. This oven has been designed in accordance with the requirements of UL and CSA International and complies with the maximum allowable wood cabinet temperatures of 194 °F (90 °C).

## Product dimensions - Combi. ovens



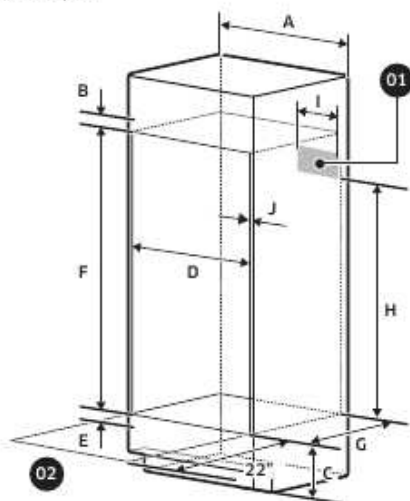
DIMENSION		
A	43 <sup>1</sup> / <sub>4</sub> " (109.9 cm)	Overall height
B	28 <sup>1</sup> / <sub>2</sub> " (72.4 cm)	Recessed width
C	42" (106.5 cm)	Recessed height
D	23 <sup>1</sup> / <sub>8</sub> " (58.7 cm)	Recessed depth
E	29 <sup>3</sup> / <sub>4</sub> " (75.6 cm)	Door Width
F	67" (170 cm)	Conduit length
G	29 <sup>7</sup> / <sub>8</sub> " (75.9 cm)	Overall width (Handle width)
H	2 <sup>9</sup> / <sub>16</sub> " (6.5 cm)	Handle Depth

# Preparation

## Cabinet dimensions - Combi. ovens

### Combi Ovens Installed in Cabinet

- 01 Junction Box
- 02 Allow a minimum of 22" for clearance to adjacent corners, drawers, walls, etc. when door is open



Cabinet	DIMENSION
A	30" (76.2 cm)
B	Min. 1 <sup>3</sup> / <sub>16</sub> " (3.0 cm)
C	12" (30.5 cm)
D	Min. 28 <sup>1</sup> / <sub>2</sub> " / Max. 28 <sup>5</sup> / <sub>8</sub> " (Min. 72.4 cm / Max. 72.7 cm)
E	Min. 1" / Max. 1 <sup>1</sup> / <sub>4</sub> " (Min. 2.5 cm / Max. 3.2 cm)
F	42 <sup>1</sup> / <sub>4</sub> " (107.2 cm)

Cabinet	DIMENSION
G	Min. 23 <sup>1</sup> / <sub>2</sub> " (Min. 59.7 cm)
H	Min 30 <sup>1</sup> / <sub>2</sub> " (Min 755 mm)
I	Max. 9 <sup>1</sup> / <sub>2</sub> " (Max. 24.1 cm) - Junction Box
J	Min. 1 <sup>1</sup> / <sub>16</sub> " (1.75 cm) - Wooden cabinet thickness

If codes permit and a separate ground wire is used, it is recommended that a qualified electrical installer determine that the ground path and the wire gauge are in accordance with local codes.

Check with a qualified electrical installer if you are not sure the oven is properly grounded.

This oven must be connected to a grounded-metal permanent wiring system.

Be sure that the electrical connection and wire size are adequate and in conformance with the National Electrical Code, ANSI/NFPA 70-latest edition or CSA Standards C22.

1-94, Canadian Electrical Code, Part 1 and C22.2 No. D-M91-latest edition, and all local codes and ordinances.

A copy of the above code standards can be obtained from:

National Fire Protection Association  
 1 Batterymarch Park  
 Quincy, MA 02169-7471

CSA International  
 8501 East Pleasant Valley Road  
 Cleveland, OH 44131-5575

### Electrical Connection

To properly install your oven, you must determine the type of electrical connection you will be using and follow the instructions provided in this manual.

- Oven must be connected to the proper electrical voltage and frequency as specified on the model/serial/rating plate. The model/serial/rating plate is located below the control panel on combi ovens. See the following illustrations.



**Combi oven**

A. Model/serial/rating plate

- A circuit breaker is recommended.
- Use the chart below to determine the minimum recommended dedicated circuit protection.

KW Rating (240 V)	KW Rating (208 V)	Recommended Circuit Size (Dedicated)
≤4.8 KW	≤4.1 KW	20 Amp
4.9 KW - 7.5 KW	4.3 KW - 6.2 KW	30 Amp
7.3 KW - 9.6 KW	6.3 KW - 8.3 KW	40 Amp
9.7 KW - 12.0 KW	8.4 KW - 10.4 KW	50 Amp

- Connect directly to the circuit breaker box (or fused disconnect) through flexible, armored or nonmetallic sheathed, copper cable (with grounding wire). See "Electrical Connection" section.

- Flexible conduit from the oven should be connected directly to the junction box.
- Fuse both sides of the line.
- Do not cut the conduit. The length of conduit provided is for serviceability of the oven.
- A UL listed or CSA approved conduit connector must be provided.
- If the house has aluminum wiring, follow the procedure below:
  1. Connect a section of solid copper wire to the ends of the flexible conduit leads.
  2. Connect the aluminum wiring to the added section of copper wire using special connectors and/or tools designed and UL listed for joining copper to aluminum.

Follow the electrical connector manufacturer's recommended procedure. Aluminum/copper connection must conform with local codes and industry accepted wiring practices.

For power requirements for models NQ70M6650D, and NQ70M7770D refer to the following table.

Model	240 VAC	208 VAC
	kW	kW
NQ70M6650D	8.2	6.2
NQ70M7770D	9.5	7.2

# Installation instructions

## Prepare built-in oven

### ⚠ WARNING

#### Excessive Weight Hazard

Use two or more people to move and install an oven. Failure to do so can result in back or other injury.

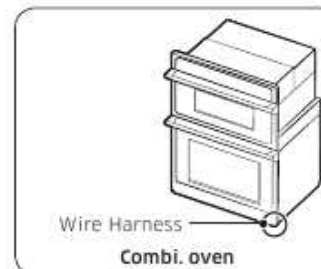
1. Decide on the final location for the oven. Avoid drilling or cutting into house wiring during installation.
2. To avoid floor damage, set the oven on a cardboard prior to installation. Do not use handle or any portion of the front frame for lifting.
3. Remove the shipping materials and tape from the oven. Remember to keep the packing materials that may be needed for installation.
4. Remove the hardware package from inside of the bag containing literature.
5. Remove racks and other parts from inside the oven.
6. Move oven and cardboard close to the oven's final location.

## Remove and replace oven door

**IMPORTANT:** Use two hands to remove lower oven door. Upper oven door can't be removed.

Prior to removing the oven door, prepare a surface where you will place it. This surface should be flat and covered with a soft blanket, or use the corner posts from your packaging material.

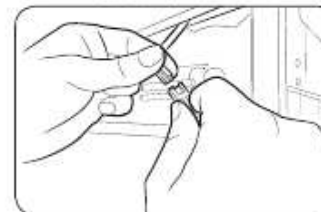
### Disconnect LED light wire harness



Locate the LED light wire harness and disconnect it before removing the door.



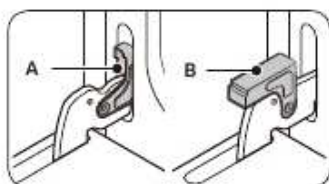
1. Carefully pull the wire to reveal the connector.



2. Disconnect the connector.



### Remove lower oven door

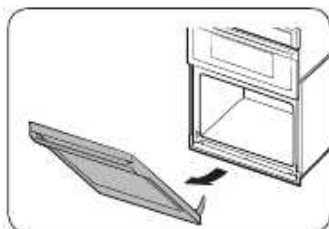


- A. Oven door hinge lock in locked position
- B. Oven door hinge lock in unlocked position

1. Open the oven door.
2. Locate the oven door hinge locks in both corners of the oven door, and then rotate the hinge locks toward the oven door to the unlocked position (see illustration B). If the door hinge lock is not rotated fully, the door will not remove properly.



3. Partially close the door to engage the door latch locks. The door will stop at this point.



4. Using two hands, grasp the edges of the oven door. Lift and pull the oven door toward you and remove. You may need to gently shift door from side to side as you pull.
5. Set the oven door aside on the prepared covered work surface with the oven door resting on its handle.
6. To continue with the oven installation, go to the "Positioning Oven Feet for Multiple Cabinet Cutout Heights" section.

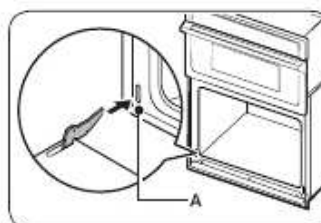
### ⚠ CAUTION

The door of the upper oven cannot be removed.

### Replace oven door

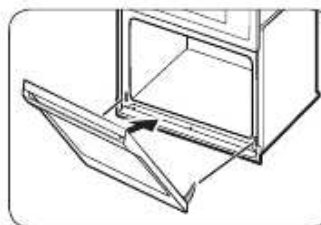
### ⚠ CAUTION

The door is very heavy. You may need help lifting the door high enough to slide it into the hinge slots. Do not lift the door by the handle.



- A. Slot in the oven cavity for door hinge lock

1. Using two hands, grasp side edges of door at the midpoint. Face the oven cavity.
2. Locate the slots on each side of the oven cavity for the door hinge locks.



3. At a 45° angle, align door hinges with slots in the lower front of the oven cavity. Slowly insert door, making sure you maintain the 45° angle. You will know the door is engaged in the slot when you feel a slight drop.

## Installation instructions



4. Lower the oven door to the fully open position. If the oven door does not open to a full 90°, repeat steps 1 through 3.
5. Locate the oven door hinge locks in the corners of the oven door, and rotate the hinge locks toward the oven cavity to the locked position. See Step 1 (illustration A) in the "Remove Oven Door" section for proper locked position.
6. Close the oven door.
7. When the hinges are properly installed and the door closed, there should be an even gap between upper and lower door. If one side of the oven door is hanging lower than the other, the hinge on that side is not properly installed.
8. Connect Wire Harness.

## Electrical connection

### For Combi. Ovens

#### ⚠ WARNING

##### Electrical Shock Hazard

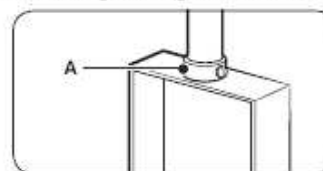
Disconnect power before servicing.

Use 8 gauge solid copper wire.

Make sure to ground the oven.

Failure to follow these instructions can result in death, fire, or electrical shock.

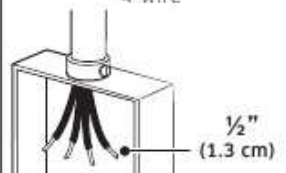
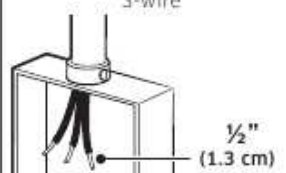
This oven is manufactured with a neutral (white) power supply wire and a cabinet-connected ground (green or bare) wire twisted together.



A. UL listed or CSA approved conduit connector

1. Disconnect power.
2. Feed the flexible conduit from the oven through the opening in the cabinet.
3. Remove junction box cover if it is present.
4. Install a UL listed or CSA approved conduit connector to the junction box.
5. Route the flexible conduit from the oven to the junction box through a UL listed or CSA approved conduit connector.
6. Tighten screws on conduit connector.
7. See "Electrical Connection Options Chart" to complete installation for your type of electrical connection.

### Electrical Connection Options Chart

If your home has:	Go to section:
<p>4-wire</p> 	4-Wire Cable from Home Power Supply
<p>3-wire</p> 	3-Wire Cable from Home Power Supply

#### ⚠ WARNING

##### Electrical Shock Hazard

Disconnect power before servicing.

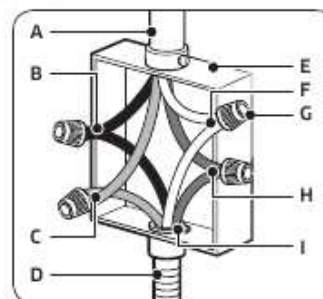
Use 8 gauge solid copper wire.

Electrically ground oven.

Failure to follow these instructions can result in death, fire, or electrical shock.

### 4-Wire Cable from Home Power Supply

**IMPORTANT:** Use the 4-wire cable from home power supply in the U.S. where local codes do not allow grounding through neutral, New Branch circuit installations (1996 NEC), mobile homes and recreational vehicles, new construction and in Canada.



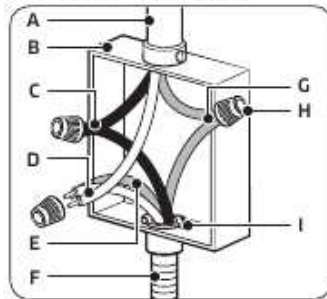
- A. Cable from home power supply
- B. Black wires (normally L1)
- C. Red wires (normally L2)
- D. 4-wire flexible conduit from oven
- E. Junction box
- F. White wires (normally N-neutral)
- G. UL listed wire connectors
- H. green wires (normally G-ground)
- I. UL listed or CSA approved conduit connector

1. Connect the 2 black wires (B) together using a UL listed wire connector.
2. Connect the 2 red wires (C) together using a UL listed wire connector.
3. Connect the 2 white wires (F) together using a UL listed wire connector.
4. Connect the green (or bare) ground wire (H) from the oven cable to the green (or bare) ground wire (in the junction box) using a UL listed wire connector.
5. Install junction box cover.

# Installation instructions

## 3-Wire Cable from Home Power Supply - U.S. Only

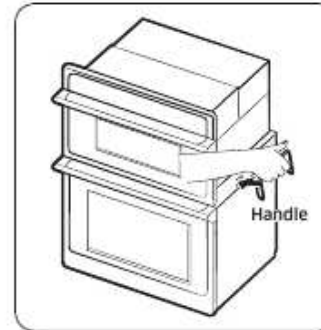
**IMPORTANT:** Use the 3-wire cable from home power supply where local codes permit a 3-wire connection.



1. Connect the 2 black wires (C) together using a UL listed wire connector.
2. Connect the 2 white wires (D) and the green (or bare) ground wire (of the oven cable) using a UL listed wire connector.
3. Connect the 2 red wires (G) together using a UL listed wire connector.
4. Install junction box cover.

- A. Cable from home power supply
- B. Junction box
- C. Black wires (normally L1)
- D. White wires (normally N-neutral)
- E. green wires (normally G-ground)
- F. 4-wire flexible conduit from oven
- G. Red wires (normally L2)
- H. UL listed wire connectors
- I. UL listed or CSA approved conduit connector

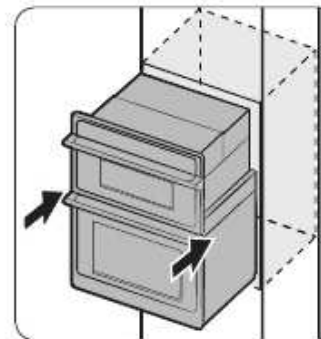
## Install oven



1. Using 2 or more people, lift the oven partially into the cabinet cutout. Use the handle as shown below.

**NOTE**

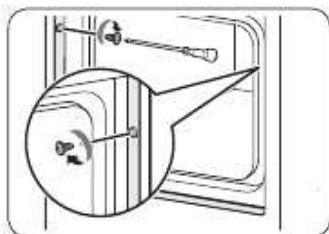
Carefully push against front oven frame.



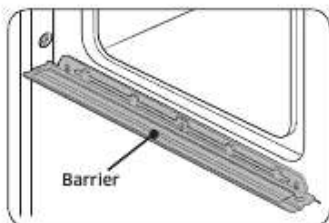
2. Push against the seal area of the front frame to push the oven into the cabinet until the back surface of the front frame touches the front wall of the cabinet.

**CAUTION**

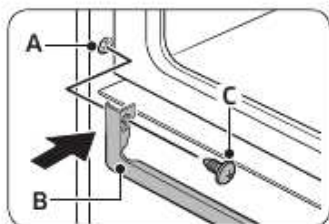
Only push the lower oven. Do not push the upper oven. (To prevent radio frequency leakage.)



3. Push oven completely into the cabinet and center the oven into the cabinet cutout.
4. Remove the tape from front trims.
  - Securely fasten the oven to the cabinet using the screws provided.
  - Insert the screws through hole in trim aligning with hole in lower oven frame. Do not overtighten screws.



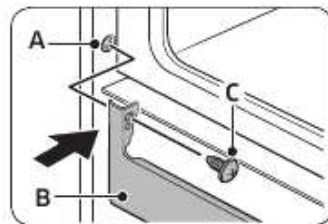
- ⚠ WARNING**  
When inserting the oven, use caution not to deform or damage the barrier underneath.



- A. Trim Left
- B. Trim Bottom
- C. Screw

5. The bottom metal trim are shipped in the foam packing. To install the metal bottom trim, see following instructions.
  - Align tab of the bottom trim with a hole in the left side trim of the unit as shown. Repeat on the right side.
  - Using one screw on each side of the trim tab, fasten the trim securely to the oven.

- ⚠ CAUTION**  
Lower oven door should be removed, before fastening the trim.



- A. Trim Left
- B. Trim Bottom Large
- C. Screw



6. If the cutout size is larger than 1.5 inches use of the wider bottom trim is recommended.

- NOTE**  
The upper oven can be fixed with 4 screws, and the lower oven with 2 screws.

# Self-diagnosis

## Temp sensor & Heater check

1. After connecting the power, check if the display works properly.
2. Remove all accessories (Gliding Rack, Flat-Rack, Smart Divider...etc.) from inside of the oven cavity.
3. You cannot proceed with self-diagnosis if the oven cavity is hot or the door is open.
  - In this case, "Hot or door" message appears on the display.
4. To start self-diagnosis, press both Hidden Keys simultaneously for 5 seconds.
  - Refer to the table below for the hidden keys for each model.
  - Self-diagnosis takes approximately 4~5 minutes.

Model	NQ70M6650**	NQ70M7770**
Control panel		
Hidden Key	<b>Bread Proof + "2"</b>	<b>MICROWAVE + LOWER OVEN</b>

5. If there is no error, 'PASS' appears on the display with an alert sound.
6. If there is an error, following message appears on the display with an alert sound.

Model		NQ70M6650**	
		Error code	Remark
Feature	Lower Broil	H-4	Lower Oven Only
	Lower Bake	H-3	

Model		NQ70M7770*	
		Error code	Remark
Feature	Lower Broil	H-4	Lower Oven Only
	Lower Bake	H-3	

7. If an error occurs, contact a Samsung service center for further service.

### NOTE

If you see any other error messages that are not listed above, please contact a Samsung service center, call e.g. 1-800-SAMSUNG (726-7864).

# Troubleshooting

## Information codes

### Oven

Displayed code	Possible cause	Solution
C-d0	This code occurs if the control key is short for 1 minute.	Clean the buttons and make sure there is no water on/ around them. Turn off the oven and try again. If the problem continues, contact a local Samsung service center.
C-d1	This code occurs if the door lock is mispositioned.	Touch <b>OVEN OFF</b> , and then restart the oven. If the problem persists, disconnect all power to the oven for at least 30 seconds and then reconnect the power. If this does not solve the problem, call for service.
C-F0	This code occurs if communication between the Main and Sub PBA is interrupted.	
C-F2	This code occurs if communication between the Main and Touch is interrupted.	
C-20	The oven sensor is open when the oven is operating. The oven sensor is short when the oven is operating.	

Displayed code	Possible cause	Solution
C-21	This code occurs if the internal temperature rises abnormally high.	Touch <b>OVEN OFF</b> , and then restart the oven. If the problem persists, disconnect all power to the oven for at least 30 seconds and then reconnect the power. If this does not solve the problem, call for service.
C-23	The temp probe sensor is short when the oven is operating.	
C-30	The PCB sensor is open when the oven is operating. The PCB sensor is short when the oven is operating.	
C-31	This code occurs if the PCB temperature rises abnormally high.	Call for service.
C-70	The Steam sensor is open when the oven is operating. The Steam sensor is short when the oven is operating.	Touch <b>OVEN OFF</b> , and then restart the oven. If the problem persists, disconnect all power to the oven for at least 30 seconds and then reconnect the power. If this does not solve the problem, call for service.
C-72	There are drain system-related problems.	
C-A2	Cooling motor is abnormally operated.	Call for service.
-dC- (NQ70M7770DG only)	This code appears if the divider is inserted or removed while the oven is operating.	Make sure the divider is inserted properly, and then restart the oven. If the problem persists, disconnect all power to the oven for at least 30 seconds and then reconnect the power. If this does not solve the problem, call for service.

# SAMSUNG



Scan the QR code\* or visit  
[www.samsung.com/spn](http://www.samsung.com/spn)  
to view our helpful  
How-to Videos and Live Shows

\*Requires mobile to be installed on your smartphone

Scan this with your smartphone

Please be advised that the Samsung warranty does NOT cover service calls to explain product operation, correct improper installation, or perform normal cleaning or maintenance.

#### QUESTIONS OR COMMENTS?

COUNTRY	CALL	OR VISIT US ONLINE AT
U.S.A Consumer Electronics	1-800-SAMSUNG (726-7864)	<a href="http://www.samsung.com/us/support">www.samsung.com/us/support</a>
CANADA	1-800-SAMSUNG(726-7864)	<a href="http://www.samsung.com/ca/support">www.samsung.com/ca/support</a> (English) <a href="http://www.samsung.com/ca_fr/support">www.samsung.com/ca_fr/support</a> (French)



DE68-04454A-00