



SmartCombi SC-40G

Premium Intelligent Combination Oven



USER & OPERATOR MANUAL

Model: SmartCombi SC-40G | Serial No.: SC-40GMU8291

85,000 BTU/hr gas • 28.5 kW 3-phase electric • Wi-Fi • Bluetooth • AI Assistance

Frdeck Equipment Solutions LLC

MADE IN USA

Document Control & Important Information

Product identification

Frdeck Equipment Solutions LLC

MODEL: SmartCombi SC-40G

Total BTU output: 85,000 BTU/hr

System type: Dual system electric + gas

Electric version power: 28.5 kW (3-phase)

Connectivity: Wi-Fi and Bluetooth (Ai Assistance / Monitoring)

SERIAL NO: SC-40GMU8291

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About this manual. This manual is written for commercial food-service operators, kitchen managers, installers and service personnel. It combines the supplied product specification with practical operating guidance. Equipment installation, utility connection, commissioning, servicing and code compliance must be performed by appropriately qualified personnel in accordance with applicable local requirements.

Specification note. Product specifications in this manual are the supplied specifications for the SmartCombi SC-40GMU8291 product listing. Certification, energy, connectivity and software features should be verified against the unit's current nameplate, installation documentation and applicable authority requirements before commercial deployment.

Safety first

- Read the safety section before installation or operation.
- Keep combustible materials, packaging and cleaning chemicals away from hot surfaces.
- Use heat-resistant gloves and appropriate PPE when handling hot racks, pans and steam.
- Never bypass safety interlocks or operate the oven with damaged electrical, gas, water or door components.
- Steam can cause severe burns. Open the door slowly and stand clear of the steam plume.
- Lock the casters before normal cooking.

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Quick-start promise: The SmartCombi SC-40G is designed to move a commercial kitchen from prep to repeatable production with programmable cooking, humidity control, core-temperature feedback, automated cleaning and connected monitoring.

1. Product Overview

The SmartCombi SC-40G is a floor-standing premium combination oven intended for high-volume commercial food production. Its operating platform combines convection heat, steam and humidity management with programmable recipes and a 10.1-inch SmartChef multi-touch interface.



Front-view reference. Use the touchscreen to select cooking modes, temperatures, time, humidity and programmable recipes. The interior provides 10 rack positions for high-throughput production.

Designed for production kitchens

- 20 × GN 1/1 or 10 × full sheet pans
- Dual reversible high-velocity fans with five speed levels
- 0–100% humidity control in 1% increments
- High-capacity boiler with automatic fill and descaling
- Five-level automatic self-cleaning system
- Core temperature probe, hold and cool-down functions
- USB data transfer and software-update capability
- Wi-Fi and Bluetooth for monitoring; Ethernet and cloud-ready architecture

2. Technical Specifications

General

Item	Specification
Model	SmartCombi SC-40GMU8291 Oven
Product category	Premium Intelligent Combination Oven (Combi)
Capacity	20 × GN 1/1 (530 × 325 mm) or 10 × full sheet pans (18" × 26")
Racks	10 high-strength chrome-plated racks (included)
Cooking modes	Convection, Steam, Combi, Regeneration, Low-Temperature, Sous-Vide, Delta-T, Overnight Cooking
Control system	10.1" multi-touch SmartChef interface with AI assistance
AI Future	Built-in AI memory for kitchen notes, recipe ideas, cooking preferences, menu inspiration and evolving smart-oven assistance

Dimensions & Weight

Item	Specification
Exterior width	39.4 in (1000 mm)
Exterior depth	37.8 in (960 mm)
Exterior height	73.2 in (1860 mm) including casters
Chamber (W×D×H)	27.6 × 25.6 × 33.5 in (700 × 650 × 850 mm)
Net weight	685 lbs (311 kg)
Shipping weight	760 lbs (345 kg)

2. Technical Specifications — continued

Performance & Power

Item	Specification
Heating system	High-efficiency gas or electric (field configurable)
Gas version	85,000 BTU/hr (24.9 kW) – Natural Gas / LP convertible
Electric version	28.5 kW (3-phase)
Temperature range	86°F – 572°F (30°C – 300°C)
Steam generator	High-capacity boiler with automatic fill & descaling
Humidity control	0 – 100% in 1% increments
Fan system	Dual reversible high-velocity fans with 5 speed levels
Preheat	Approximately 8–10 minutes to 350°F

Utilities, Construction & Connectivity

Item	Specification
Control voltage	120 V / 60 Hz (or 230 V version available)
Water	¾" cold water inlet + drain connection
Gas	¾" NPT (rear)
Data	Wi-Fi and Bluetooth; real-time performance monitoring; Ethernet; USB; cloud-ready
Exterior	Brushed 304 stainless steel with black glass accents
Interior	Seamless 316 stainless steel cooking chamber
Door	Double-glazed tempered glass with cool-touch handle and LED door lighting
Insulation	High-density multi-layer insulation
Mobility	Heavy-duty locking casters (2 swivel with brakes)
Specified compliance	NSF/ANSI 4, UL/cUL Listed, CSA, Energy Star commercial oven compliant, HACCP data logging capable / FDA Food Code compatible
Warranty	3 years parts & labor; 7 years steam generator/heat exchanger parts; lifetime stainless exterior and cooking chamber against corrosion

3. Installation & Utility Connections

Installation should be completed by qualified commercial-equipment personnel. Confirm the exact unit configuration and nameplate before connecting gas or electricity. Provide adequate service access, ventilation, drainage and clearance for the oven door and maintenance.



Rear-view reference. The rear panel shows the general locations for gas, water, drain and electrical service on the illustrated product. Connection locations can vary by configuration; use the actual unit's labels and installation documentation.

Utility checklist

- Gas service: 3/4" NPT; confirm fuel type and local code requirements.
- Water: 3/4" cold-water inlet with appropriate filtration/pressure control as required by site conditions.
- Drain: connect to a suitable drain system in accordance with local plumbing requirements.
- Electrical: 28.5 kW 3-phase electric version; verify voltage/frequency/nameplate before energizing.
- Control power: 120 V / 60 Hz, with 230 V version available as specified.
- Wi-Fi/Ethernet: provide stable network coverage where remote monitoring is desired.
- Level and lock casters before commissioning.

Important: Do not infer electrical conductor size, breaker rating, gas pressure, water pressure or venting requirements from this manual alone. These are installation-design items and must be determined from the final unit configuration, local codes and the qualified installer.

4. First Start & Commissioning

Before the first production run, inspect the oven for shipping damage and remove all packaging, films and transit restraints. Confirm the chamber is clean and all racks are correctly seated.

Commissioning sequence

1. Confirm the oven is level and the locking casters are engaged.
2. Confirm gas, water, drain and electrical connections have been completed and inspected by qualified personnel.
3. Power the unit and allow the SmartChef interface to complete startup.
4. Set the date/time and preferred language if prompted.
5. Connect Wi-Fi or Ethernet if monitoring, cloud functions or software updates are required.
6. Run a controlled heat/preheat cycle and verify that temperature rises normally.
7. Verify steam generation and humidity response using a low-risk test program.
8. Verify the door closes securely and the interior light operates.
9. Test the core probe with a known-temperature food or water reference.
10. Record the commissioning date, configuration, utility settings and service contact information.

Recommended operator handover

Train operators on door/steam safety, recipe selection, probe use, cleaning chemistry, emergency shutdown procedures and the meaning of touchscreen alarms. Keep this manual accessible to kitchen staff.

5. SmartChef Touchscreen

The 10.1-inch SmartChef multi-touch interface is the primary control surface. Screen layouts can change with software revisions; labels and icons shown here are representative of the supplied product design.



Typical home-screen elements

- **Wi-Fi indicator:** confirms network connection status when enabled.
- **Bluetooth indicator:** shows Bluetooth availability/connection status.
- **AI:** opens the AI assistance functions described in Section 6.
- **Cooking modes:** Convection, Steam, Combi, Regeneration, Low Temp, Sous-Vide, Delta-T and Overnight.
- **Cooking status:** displays selected temperature, remaining time and active program state.
- **Recipe area:** access programmable recipes and production favorites.
- **USB:** use the service/data port for approved data transfer and updates.

Operator tip: Build a small library of validated recipes first. Once a recipe produces the desired result consistently, save it with a clear name, batch size, rack plan and finishing notes.

6. AI Assistance — Features & Best Practices

The SmartCombi AI Future is specified as built-in AI memory for kitchen notes, recipe ideas, cooking preferences, menu inspiration and evolving smart-oven assistance. The goal is to help operators turn repeated kitchen decisions into reusable production knowledge.

AI feature map

1. Capture Kitchen notes, preferences and successful cooking observations.	2. Remember Store useful operating context for future assistance.	3. Assist Suggest recipe ideas, settings or workflow options.	4. Refine Use operator feedback to improve future suggestions.
Examples: • preferred doneness • batch size • menu constraints	Examples: • notes on browning • timing preferences • repeatable kitchen practices	Examples: • mode selection • cooking sequence ideas • menu inspiration	Examples: • save successful recipes • record adjustments • keep version notes

Practical AI workflows

Recipe development: Enter the target product, batch size, desired finish and known constraints. Use the AI assistant to organize ideas, then validate the final cooking program through controlled kitchen testing before production.

Kitchen memory: Save notes such as “use rack 3–8 for this pan load,” “finish with a short dry-crisp phase,” or “hold below the preferred serving temperature.” Treat these as operator knowledge, not as automatic guarantees.

Menu inspiration: Use AI to brainstorm variations around the same base preparation—for example, alternate proteins, vegetables, sauces or finishing steps—while keeping the actual production recipe under chef approval.

Monitoring: When connected features are available, Wi-Fi/Bluetooth can support real-time performance monitoring. Network availability and software version can affect the exact functions shown on screen.

AI safety rule: AI suggestions are assistance, not a substitute for food-safety controls, chef validation, HACCP procedures, allergen controls or local food-code requirements. Always verify time, temperature, core temperature and holding requirements for the food being prepared.

6. AI Assistance — Example Prompts & Operating Pattern

The following examples illustrate how a commercial kitchen can use the specified AI memory and assistance functions. Exact prompts and interface wording may vary by software version.

Operator input "Remember that our roast chicken should finish with crisp skin and a moist center."	AI assistance Creates a reusable preference/note for future recipe development.
Operator input "Give me three combi-oven approaches for 40 portions of roasted vegetables."	AI assistance Generates menu/process ideas that the chef can test and validate.
Operator input "Our preferred workflow is prep → steam/combi cook → dry finish → short hold."	AI assistance Stores a kitchen workflow preference for future assistance.
Operator input "Suggest a production recipe using our existing cooking modes and a core-probe finish."	AI assistance Helps structure a repeatable program around the oven's available controls.

AI implementation checklist

1. Start with validated recipes.
2. Record successful adjustments as kitchen notes.
3. Use AI for ideation and organization, not unverified food-safety decisions.
4. Review suggestions before adding them to production.
5. Save the final approved program with clear version/date notes.
6. Periodically review stored preferences so outdated practices do not become defaults.

7. Cooking Modes & Core Probe

Mode selection should match the food's heat-transfer and moisture requirements. Use the core probe when internal temperature—not elapsed time—is the key quality or safety endpoint.

Mode	Typical use
Convection	Dry circulating heat for browning, roasting and baking.
Steam	High-moisture cooking for vegetables, grains and delicate products.
Combi	Combined hot air and steam for balanced moisture retention and browning.
Regeneration	Reheating prepared foods while managing moisture and quality.
Low-Temperature	Gentler cooking for controlled texture development.
Sous-Vide	Controlled low-temperature preparation; use appropriate sealed-food procedures.
Delta-T	Controls the relationship between chamber temperature and core temperature for gradual cooking.
Overnight	Extended programmed cooking for appropriate products and supervised production plans.

Core-probe best practice

Place the probe in the thickest or most representative portion of the product, avoiding bones, pan surfaces and unusually thin sections. Secure the cable so it cannot contact moving fans, hot surfaces or the door seal. Verify the displayed core temperature before ending a probe-controlled cycle.

Food safety: Cooking temperatures and holding limits must follow the recipe, your HACCP plan and applicable food-code requirements. This manual does not replace those controls.

8. Recipes, Scheduling & Production Workflow

The oven is specified with 500 programmable recipes. A strong recipe record should capture more than time and temperature so the result is repeatable across operators and shifts.

Recommended recipe record

- Recipe name and version/date
- Food/product and batch size
- Rack positions and pan type
- Cooking mode
- Chamber temperature
- Humidity percentage
- Fan speed
- Time or core-temperature target
- Preheat requirement
- Rest/hold instructions
- Finishing notes and quality checks

High-throughput planning

Use the 10 rack positions to standardize load patterns. Keep pan loading consistent so air and steam can circulate. When changing from a light load to a dense load, validate the recipe rather than assuming the same time will produce the same result.

Commercial value drivers

- **Consistency:** programmable recipes reduce operator-to-operator variation.
- **Throughput:** large rack capacity supports batch production.
- **Menu flexibility:** one platform supports dry, steam and combination techniques.
- **Labor support:** saved programs, probe cooking and AI assistance can reduce repetitive decision-making.
- **Traceability:** connectivity and HACCP-capable data logging can support production documentation when configured and used appropriately.

9. Cleaning & Preventive Maintenance

Regular cleaning protects food quality, equipment life and operator safety. Follow the chemical manufacturer's instructions and the final unit-specific cleaning procedure.

After each production period

1. Remove food debris and racks as appropriate.
2. Run the selected cool-down/cleaning process.
3. Use the five-level automatic self-cleaning system appropriate to soil level.
4. Inspect the door glass, gasket and chamber surfaces.
5. Rinse/wipe areas as required by the cleaning chemistry instructions.
6. Leave the chamber in the recommended drying/venting condition.

Periodic care

- Follow the boiler's automatic descaling procedure and service intervals.
- Inspect the drain path for blockage.
- Check the door gasket for wear, cuts or deformation.
- Keep fan guards and air pathways clean.
- Inspect casters and brakes.
- Inspect electrical and gas connection points for damage or abnormal conditions.
- Maintain water filtration/conditioning if required by site water quality.

Never: spray water directly into electrical controls, use unauthorized abrasive tools on stainless surfaces, mix cleaning chemicals, or open service panels while energized.

10. Connectivity: Wi-Fi, Bluetooth, USB & Ethernet

The SmartCombi SC-40G is specified with Wi-Fi and Bluetooth for real-time performance monitoring, plus Ethernet, USB and cloud-ready connectivity.

Recommended connected-kitchen setup

1. Place the oven where reliable network coverage is available.
2. Connect the oven to the approved kitchen network according to the current interface/software instructions.
3. Confirm the Wi-Fi icon/status on the touchscreen.
4. Pair Bluetooth accessories only when supported by the installed software/configuration.
5. Use Ethernet where a fixed network connection is preferred.
6. Use USB only for approved data transfer, recipe management or software updates.

Operational security

Use controlled network credentials, restrict access to authorized kitchen personnel and keep software updated through approved channels. Do not connect unknown USB devices or install unapproved software.

Connectivity troubleshooting

If monitoring is unavailable, first verify network signal and the oven's connection indicator. Then check whether the issue affects Wi-Fi, Bluetooth, Ethernet or the cloud service. Local cooking functions should be evaluated separately from remote monitoring functions.

11. Troubleshooting

Symptom	First checks	Escalate when
Oven will not start	Verify power, emergency/safety conditions, door closure and control display.	Electrical service or safety device requires service.
No heat / slow heat	Confirm selected mode, setpoint, preheat state and utility availability.	Heat remains abnormal after basic checks.
No steam	Check water supply, drain condition and selected humidity/mode.	Boiler or fill system requires service.
Uneven cooking	Check pan spacing, rack loading, fan path and recipe settings.	Pattern persists with validated loading.
Probe reading unusual	Check probe placement, cable routing and probe condition.	Probe remains inaccurate or damaged.
Cleaning incomplete	Confirm correct cleaning level, water supply and drain flow.	Soil remains after correct cycle.
Wi-Fi unavailable	Check network coverage and Wi-Fi status on screen.	Network is available but oven cannot connect.
Bluetooth unavailable	Confirm Bluetooth is enabled and accessory is compatible/paired.	Pairing remains unsuccessful.
AI assistance unavailable	Check software/interface status and connectivity if the feature requires it.	Feature remains unavailable after approved restart/update.

Service escalation

Stop operation and contact qualified service personnel for gas leaks, electrical arcing, repeated safety faults, damaged door/glass, abnormal smoke, persistent over-temperature conditions or any situation where continued operation could be unsafe.

12. Warranty, Service & Operator Checklist

Specified warranty

- 3 years parts & labor
- 7 years steam generator/heat exchanger parts
- Lifetime stainless exterior and cooking chamber against corrosion

Warranty administration

Keep the serial number, installation date, purchase documentation and service records together. The exact warranty terms, exclusions, response process and registration requirements should be confirmed with Frdeck Equipment Solutions LLC for the delivered unit.

Daily operator checklist

- Door, glass and gasket inspected
- Chamber and racks clean
- Drain path clear
- Water supply available
- Gas/electrical service normal
- Casters locked
- Recipe/program selected and verified
- Probe available and correctly positioned when required
- Wi-Fi/Bluetooth monitoring checked when used
- End-of-shift cleaning completed



Frdeck Equipment Solutions LLC

SmartCombi SC-40G • Serial SC-40GMU8291

85,000 BTU/hr • 28.5 kW (3-phase) • Wi-Fi • Bluetooth • AI Assistance / Monitoring

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End of manual