

COMMERCIAL GAS SMOKER

GS-851NC371M

Professional User & Care Manual



Frdeck Equipment Solutions LLC

Natural Gas or Propane • 35,000 BTU • 850 sq inches cooking surface

Designed for commercial smoking applications with digital temperature control, probe monitoring, adjustable smoke vents, multiple rack positions, and heavy-duty mobility.

1. Product Identification & Quick Reference

Record and verify the information below against the physical rating plate before installation, service, or ordering replacement parts.

Identification	Factory / unit information
Manufacturer	Frdeck Equipment Solutions LLC
Model	GS-851NC371M
Fuel Type	Natural Gas or Propane
BTU Output	35,000 BTU
Serial No.	MS92715411
Country of Origin	MADE IN USA
Warranty	2 Years Parts & Labor

Important installation note

This manual contains the supplied product specifications and practical operating guidance. It does not establish gas pressure, regulator size, pipe size, vent connector size, minimum clearances, electrical ratings, or local permit requirements because those values were not supplied for this unit. The installer must verify the actual rating plate, approved installation instructions, local authority requirements, and the applicable fuel-gas and commercial ventilation requirements before commissioning.

Fuel conversion warning

The rating plate identifies the appliance for Natural Gas or Propane. Do not change fuel type, burner components, or regulator settings unless the conversion is specifically permitted and the conversion procedure is supplied or approved by the manufacturer. NFPA guidance likewise cautions against converting gas type without manufacturer or serving-gas-supplier instructions. ■cite■turn0search36■

2. Product Overview



Commercial capacity, controlled smoking. The GS-851NC371M combines an 850 sq inch cooking surface with a 35,000 BTU gas-fired heating system, digital temperature control with probe, adjustable smoke vents, multiple rack positions, and a heavy-duty steel cabinet with porcelain coating.

Feature	Commercial value
Digital temperature control + probe	Helps operators monitor and manage chamber temperature without relying only on visual estimates.
850 sq inch cooking surface	Provides a large loading area for higher-volume smoking workflows.
Double-wall insulated construction	Supports heat retention and more stable operating conditions.
Commercial-grade stainless-steel burners	Built around a commercial gas-fired heating system.
Adjustable smoke vents	Lets the operator adjust smoke movement and flavor-development conditions.
Removable drip pan	Simplifies collection of drippings and routine cleaning.
Heavy-duty casters	Allows the cabinet to be repositioned when safe to do so.

Feature	Commercial value
Multiple rack positions	Supports different product sizes and loading configurations.

3. Technical Specifications

The following values are the specifications supplied for this model.

Specification	GS-851NC371M
Chamber Capacity	850 sq inches cooking surface
Fuel Type	Natural Gas or Propane
Temperature Range	100°F – 350°F
Construction	Heavy-duty steel with porcelain coating
Dimensions (L × W × H)	48" × 30" × 60"
Weight	285 lbs
BTU Output	35,000 BTU
Warranty	2 Years Parts & Labor

Operator verification checklist

Before installation / commissioning	Verify
Model and serial number	Matches the physical rating plate: GS-851NC371M / MS92715411.
Fuel configuration	The unit is configured for the fuel being supplied and any required conversion has been completed by an authorized/qualified technician.
Gas supply	Supply pressure, regulator arrangement, piping size, shutoff valve and connector comply with the approved installation requirements. Exact values are not supplied in this manual.
Ventilation / exhaust	Required combustion air and exhaust arrangements are provided and unobstructed.
Site support	The floor and route can safely support and move a 285 lb appliance plus the operating load.
Controls / probe	Temperature display, probe, controls and ignition system operate correctly during commissioning.

4. Safety Information

Read this section before connecting fuel, lighting the appliance, moving it, or performing service.

DANGER — GAS, FIRE & CARBON MONOXIDE

This is a fuel-burning appliance. Improper installation, adjustment, venting, or maintenance can create fire, explosion, combustion-gas, or carbon-monoxide hazards. Carbon monoxide is colorless, odorless and poisonous. CPSC advises that fuel-burning appliances be installed and operated according to manufacturer instructions and local building codes, with qualified professional installation/service where appropriate. ■cite■turn0search2■turn0search5■

Hazard	Required practice
Gas leak	If gas odor is detected, do not operate switches, create flames, or continue ignition attempts. Isolate the fuel supply if it can be done safely, leave the area, and contact the gas supplier/emergency service as appropriate.
Carbon monoxide	Never operate with blocked or improperly arranged exhaust/venting. Maintain required combustion air and ventilation. Do not bypass safety devices.
Burns	Surfaces, racks, drip pan, door hardware and exhaust components can become hot. Use appropriate heat-resistant PPE and allow adequate cooling before cleaning or servicing.
Fire	Keep combustible materials away from hot surfaces and exhaust paths. Keep the cooking chamber and drip area clean of accumulated grease and debris.
Movement	Lock casters when positioned for operation. Move only on suitable surfaces and with adequate personnel/equipment for a 285 lb appliance.
Service	Gas controls, burners, regulators, safety devices and internal fuel components should be serviced by qualified personnel unless the manufacturer expressly permits otherwise.

Do not defeat safety features. Do not operate the smoker if the door does not close correctly, the burner behaves abnormally, the exhaust path is obstructed, or a gas component is damaged.

Commercial installation context

For U.S. installations, NFPA 54 is the National Fuel Gas Code and addresses fuel-gas piping, appliance installation, safety shutoffs and venting. The current NFPA page identifies the 2027 edition as active. Local jurisdiction, adopted codes, the appliance listing/installation requirements, and the authority having jurisdiction govern the actual installation. ■cite■turn0search0■turn0search39■

5. Installation & Commissioning

Installation should be performed by a qualified commercial gas-appliance professional. The sequence below is a commissioning framework; it does not replace model-specific gas pressure, venting, clearance, or electrical instructions that must be verified for the actual unit.

5.1 Site preparation

Step	Action
1	Confirm the appliance location can accommodate the stated 48" × 30" × 60" dimensions and provide the access needed for service and safe operation.
2	Confirm the floor/supporting surface is suitable for the 285 lb appliance plus racks, food and accessories.
3	Provide the required combustion air and exhaust/ventilation arrangement for the installed appliance and local code. Never block vents or exhaust paths.
4	Keep combustible materials and unrelated equipment outside the clearances required by the approved installation instructions and local code. Do not invent or assume a clearance.
5	Position the unit so controls, gas shutoff, service areas and exhaust components remain accessible.

5.2 Gas connection

Connect only to the fuel type identified on the unit and approved for the installed configuration. Use appropriately rated commercial gas piping, fittings, shutoff equipment and connectors. The exact supply pressure, regulator settings, pipe size and connector specification are intentionally not stated here because they were not supplied with the product data. These values must be established from the approved installation information and local requirements.

After installation or restoration of gas service, the gas system should be checked for leakage before operation. NFPA materials specifically address leak checking after gas is turned on and require correction before continued operation when leakage is indicated. [■cite■turn0search40■](#)

5.3 Commissioning

Check	Acceptance condition
Fuel	Correct fuel type and approved configuration.
Leak check	No detectable gas leakage using an approved test method.
Ignition / burner	Qualified technician confirms ignition, flame behavior and burner operation are normal.
Temperature control	Digital control and probe respond to setpoint changes and indicate chamber temperature.
Exhaust / combustion air	Required airflow path is present and unobstructed.
Door / racks	Door closes correctly; racks and drip pan are seated securely.
Mobility	Casters roll correctly and locks engage when provided.

6. Operating Instructions

The operating sequence below is intentionally written around the supplied controls and features. Follow any permanent labels on the appliance and any model-specific ignition instructions supplied with the unit.

6.1 Pre-start inspection

Before every production run	Check
1	Confirm the cooking chamber is clean enough for the intended product and that the removable drip pan is installed correctly.
2	Confirm racks are correctly seated and the intended rack positions are suitable for the load.
3	Check that the door closes and seals normally and that the handle and hinges are secure.
4	Verify exhaust/vent paths and combustion-air openings are unobstructed.
5	Confirm the gas supply is available and the appliance is in the correct operating configuration.

6.2 Start-up and temperature control

1. Follow the appliance's ignition/start procedure and observe the burner. If ignition does not occur normally, stop and follow the approved troubleshooting/service procedure rather than repeatedly attempting ignition.
2. Select a chamber temperature within the supplied 100°F–350°F operating range.
3. Allow the chamber to approach the desired operating temperature before loading when the process requires a preheated chamber.
4. Use the temperature probe/control system to monitor chamber conditions. Keep the probe positioned according to the probe design and operating instructions; do not place it where it can be pinched by the door or exposed to direct flame.
5. Load food with adequate spacing for the intended airflow and smoke exposure. Avoid blocking chamber openings or forcing racks beyond their designed position.
6. Adjust smoke vents gradually to control smoke movement. Record successful settings for repeatable production rather than making large changes during a critical cook.

6.3 Shutdown

At the end of a production run, complete the appliance's normal shutdown sequence, close/isolate the fuel supply when required by the operating procedure, and allow the appliance to cool before cleaning or moving it. Never move a hot or actively firing appliance unless the approved operating procedure specifically allows it.

Food safety note

Use a calibrated food thermometer and follow the food-safety requirements applicable to the products, jurisdiction, and operation. Chamber temperature is not a substitute for verifying the internal temperature of the food.

7. Smoking Workflow & Production Practices

The following practices help operators turn the smoker's features into a repeatable commercial workflow without assigning unsupported cooking times or food temperatures.

Workflow stage	Recommended practice
Plan the load	Use rack positions to separate products where appropriate. Avoid overloading a rack or restricting airflow.
Preheat	Bring the chamber to the intended process temperature before loading when the recipe/process calls for preheating.
Add product	Load efficiently and keep the door open only as long as necessary to limit heat loss.
Manage smoke	Use the adjustable smoke vents deliberately. Make small changes and allow the chamber to respond before making another adjustment.
Monitor	Track chamber temperature with the digital control/probe and verify food condition with appropriate food-safety measurement.
Finish	Remove product using suitable heat-resistant PPE and place food into appropriate holding/cooling procedures.
Reset	Inspect the drip pan and chamber for grease or residue and complete the cleaning routine appropriate to the production schedule.

Capacity management

The stated 850 sq inch cooking surface is a surface-area specification, not a guarantee of a particular food weight or number of trays. Actual useful capacity depends on rack configuration, product size, spacing, airflow and the process being used.

Temperature management

For repeatable results, record setpoint, chamber response, vent position, rack arrangement and product load for successful recipes. This creates a site-specific operating standard without assuming a universal cooking time.

Mobility

The heavy-duty casters are intended to support mobility. Before moving, secure the door and loose accessories, ensure the appliance is cool and disconnected as required, release caster locks, and move slowly over a suitable surface. Re-lock the casters before production.

8. Cleaning, Sanitation & Preventive Maintenance

A clean smoker protects product quality, reduces accumulated grease and supports reliable operation. Establish cleaning frequency based on actual production volume and your sanitation program.

8.1 After each production cycle

- Allow the appliance to cool to a safe cleaning condition.
- Remove and empty the drip pan using appropriate PPE.
- Remove racks as permitted by the design and wash/rinse/sanitize them according to your food-safety procedure.
- Wipe accessible chamber surfaces with a cleaner compatible with porcelain-coated steel and stainless-steel components.
- Keep water and cleaning chemicals away from gas controls, electrical/control components and burner openings.
- Restore racks and drip pan only after they are clean and appropriately dry.

8.2 Routine inspection

Interval	Recommended inspection
Daily / each use	Door, handle, racks, drip pan, visible burner condition, smoke vents and obvious residue.
Weekly or according to workload	Caster operation/locks, fasteners, vent openings and condition of seals/gaskets if fitted.
Monthly or according to workload	Inspect accessible gas connection points, hoses/connectors where fitted, burner area and control response. Escalate gas-system work to qualified personnel.
At least annually / service interval	Have qualified personnel inspect gas train, burner performance, venting/exhaust, safety controls and combustion condition as applicable to the installation.

Cleaning cautions

Do not use abrasive tools that can damage the porcelain coating or stainless-steel finish. Do not flood the cabinet or spray liquid into controls, burner openings, electrical components, or gas valves. Do not use chlorine-containing or other aggressive chemicals unless specifically approved for the affected material and food-equipment application.

Grease and residue control

The removable drip pan should not be allowed to accumulate excessive grease. A heavily contaminated pan or chamber can increase smoke, odor and fire risk. If grease accumulation is abnormal, investigate operating conditions and service the appliance before returning it to production.

9. Troubleshooting

This table is intended for operator-level checks. Do not disassemble gas controls or alter regulator/burner settings unless the procedure is specifically authorized and performed by qualified personnel.

Symptom	Possible checks	Escalate when...
No heat / burner does not operate	Verify the appliance is in the correct operating mode, fuel supply is available, shutoff is open, and the control is set within the operating range.	Ignition fails, flame is abnormal, gas odor is present, or gas components require adjustment.
Temperature does not reach setpoint	Check door closure, load arrangement, vent position, fuel availability and whether the setpoint is within 100°F–350°F.	Burner output is abnormal or the unit repeatedly fails to stabilize.
Temperature overshoots	Check probe placement, control setting, door condition and whether the chamber is responding normally.	Control continues to heat beyond the expected range or a safety device is suspected.
Uneven smoke / cooking	Review rack spacing, load density, vent position and product placement. Avoid blocking airflow paths.	Persistent imbalance occurs with a normal load and correct setup.
Excess smoke or grease	Inspect drip pan, chamber cleanliness, vent openings and load for excessive dripping or residue.	Smoke is accompanied by flame, abnormal burner behavior or uncontrolled grease.
Gas odor	Stop operation. Avoid flames/switches. Isolate fuel if safe and leave the area.	Immediately contact the gas supplier/emergency service as appropriate. Do not return the appliance to service until inspected.

Never bypass an ignition, flame-safety, temperature, door, or other protective device. Repeated failures should be treated as a service issue rather than an operator adjustment.

10. Service, Parts & Ownership

For reliable commercial operation, keep a record of the unit's model and serial number and use them when contacting the manufacturer or service provider.

Service record

Date	Service / inspection performed	Technician / company

Replacement-part practice

When ordering parts or requesting service, provide: **Frdeck Equipment Solutions LLC**, model **GS-851NC371M**, serial **MS92715411**, the fuel type in use, and a clear description of the issue. Do not substitute burner, gas-valve, regulator, safety-control, probe or ignition components based solely on appearance.

Warranty

2 Years Parts & Labor is the warranty period supplied for this product. Warranty coverage, exclusions, labor location, authorization procedures, shipping responsibility and claim documentation should be confirmed against the manufacturer's current warranty terms before service work is performed.

Recommended ownership records

Keep this manual with the appliance. Record commissioning date, installer/service company, fuel configuration, routine inspection dates, and any replacement parts or control adjustments. This documentation makes the smoker easier to maintain and helps preserve a consistent production process.

11. Identification Plate & Reference View

The following information is reproduced exactly from the supplied identification data.

Frdeck Equipment Solutions LLC
MODEL: GS-851NC371M
Fuel Type: Natural Gas or Propane
BTU Output: 35,000 BTU
SERIAL NO: MS92715411
MADE IN USA



Reference image: rear product view showing the manufacturer identification plate location. Always use the physical plate on the appliance as the final authority for unit-specific identification.

12. Quick Operator Reference

Keep this page accessible to trained operators. It summarizes the safe operating mindset; it does not replace the full manual.

BEFORE USE	DURING USE	AFTER USE
Confirm correct fuel and no gas odor. Check door, racks, drip pan and vents. Confirm chamber is clean and safe. Verify controls/probe are functioning.	Stay within 100°F–350°F. Monitor chamber temperature. Manage smoke vents gradually. Keep door openings brief. Monitor product using food-safety procedures.	Complete normal shutdown. Isolate fuel when required. Allow cooling before cleaning/moving. Empty/clean drip pan. Record issues for service.

Emergency reminders

- **Gas odor:** stop, avoid ignition sources and switches, isolate fuel if safe, leave the area and contact the appropriate emergency/gas authority.
- **Suspected carbon monoxide:** move to fresh air and obtain emergency assistance; do not re-enter until the area has been declared safe. CPSC emphasizes that CO can be produced by fuel-burning appliances and that malfunctioning appliances should not be operated until properly serviced. [■cite■turn0search2■](#)
- **Fire:** follow the facility emergency plan and use only fire-response equipment and procedures for which personnel are trained.

Product at a glance

Model	Fuel	Output	Cooking surface	Temp. range	Weight
GS-851NC371M	Natural Gas or Propane	35,000 BTU	850 sq in	100°F–350°F	285 lbs

Frdeck Equipment Solutions LLC

MODEL: GS-851NC371M

SERIAL NO: MS92715411

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End of manual