

**Item Number(s):**

**Smokeless Fire-Pit Insert**

**36-Inch Item Number: STARBBQ-36SFPR**

**48-Inch Item Number: STARBBQ-48SFPR**

## **STARBBQ Smokeless Fire-Pit Insert Use & Care Guide**

**To installer or person assembling appliance:** Leave this manual with appliance for future reference.

**To consumer:** Keep this manual for future reference.

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# STARBBQ™ 36" or 48" Smokeless Fire Pit Insert Use & Care Guide

## Introduction

The STARBBQ™ 36" or 48" Smokeless Fire Pit Insert is designed to provide a clean, efficient, and nearly smokeless wood-burning experience when used correctly. This guide covers safe use, care, and common issues detailed within the product manual content.

## Safety Instructions

- For outdoor use only.
- Keep children and pets at a safe distance.
- Never leave the fire unattended.
- Do not overload the fire; keep logs and flames below the top row of air holes.
- Ensure the insert is elevated 1–2" on a non-combustible base (gravel, pavers, etc.) for proper airflow.
- Do not burn trash, softwood, pine, construction lumber, or unseasoned/wet wood.
- Always fully extinguish the fire before leaving.
- Use heat-resistant gloves when handling the optional swivel grill or adding wood.
- After rain, ensure the insert is completely dry before lighting.

## Fuel Guidelines

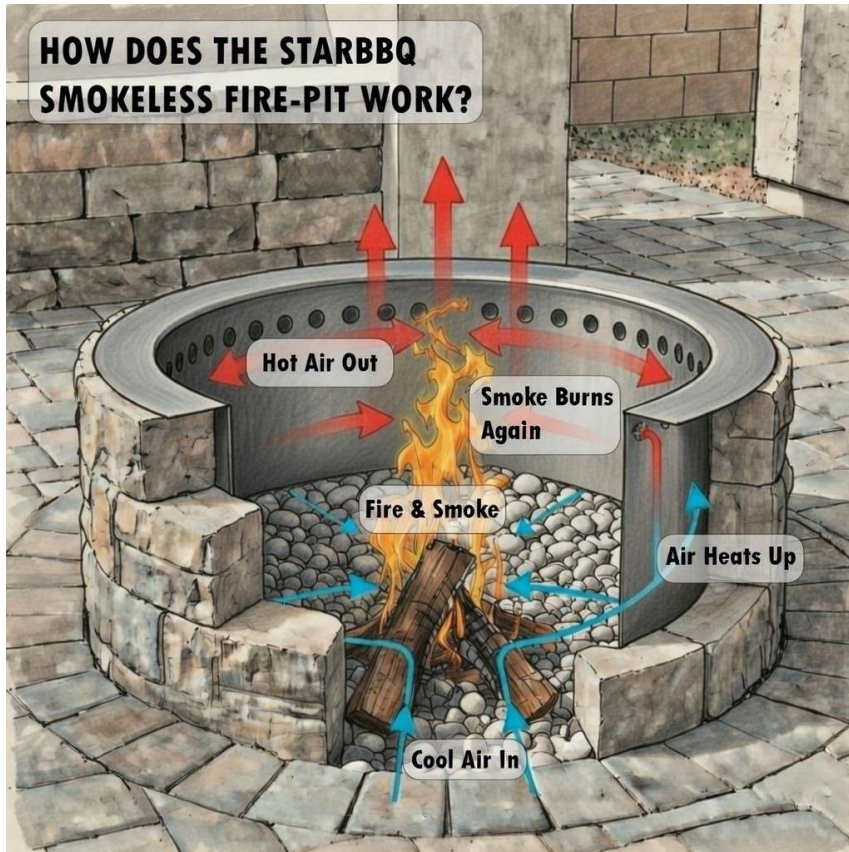
- Use only dry, seasoned hardwood with  $\leq 15\%$  moisture content.
- Recommended woods: oak, hickory, maple, ash, cherry.
- Avoid: pine, softwoods, construction lumber, wet or unseasoned wood (causes excessive smoke, sparks, and popping).

## Lighting and Operation

1. Ensure the insert is fully dry and elevated 1–2" with clear airflow underneath.
2. Clear excess ash until lower air gap is visible.
3. Start with kindling and small logs in the center.
4. Light the fire and allow flames to establish.
5. Add larger logs gradually, keeping flames below the top row of air holes.
6. For optimal smokeless performance: wait 15–20 minutes after steady flames before expecting reduced smoke.
7. Optional swivel grill: Ensure post is firmly seated and set screws are tightened with the provided Allen wrench. (Sold Separately)

# How does the STARBBQ Smokeless Fire Pit Work?

The STARBBQ™ Smokeless Fire Pit Insert achieves a cleaner, nearly smokeless burn through a specialized double-wall design that promotes secondary combustion. Here is a clear explanation of the process:



- 1. Primary Combustion:** Wood burns at the base of the insert, producing flames, heat, and initial smoke (unburned gases and particles).
- 2. Preheated Air Channels:** Cool air enters through the 1-inch gap at the bottom rim of the insert. As the fire heats the double-wall structure, this air is drawn upward between the inner and outer walls.
- 3. Secondary Air Injection:** The rising air becomes preheated as it travels through the channels. It then exits through the top row of air holes, injecting hot, oxygen-rich air directly above the flames.

- 4. Secondary Combustion:** The hot oxygenated air ignites the unburned smoke particles and gases rising from the primary fire. This “reburn” process consumes most of the smoke, resulting in a cleaner burn with significantly reduced visible smoke.
- 5. Optimal Conditions:** Required For the secondary combustion to work effectively:
  - The insert must reach full operating temperature (typically 15–20 minutes after steady flames).
  - Flames and logs must remain below the top row of air holes to allow proper air injection.
  - Bottom airflow must be unrestricted (1–2" elevation, no excess ash blocking the bottom gap).
  - Only dry, seasoned hardwood ( $\leq 15\%$  moisture) should be used.

When these conditions are met, the fire burns hotter and cleaner, producing more heat with minimal smoke.

# Achieving Smokeless Performance

The smokeless effect relies on secondary combustion enabled by preheated air channels:

- Wait 15–20 minutes after steady flames for the insert to fully heat.
- Use only dry, seasoned hardwood.
- Do not overload; keep flames below top air holes.
- Maintain clear bottom airflow and no standing water.

## Maintenance and Storage

- After each use (when cool): Scoop out excess ash to keep 1" gap below insert clear.
- After rain: Allow insert to air-dry completely (may take 1–2 sunny days).
- Clean exterior with mild soap and water; avoid abrasive cleaners on stainless surfaces.

## Troubleshooting

### Q. Fire pit is smoky (does not go smokeless).

- Insert not fully heated yet → wait 15–20 minutes after flames are steady.
- Wood is wet or unseasoned → use only dry hardwood ( $\leq 15\%$  moisture).
- Fire overloaded → logs or flames must stay below top row of air holes.
- Bottom airflow blocked → confirm 1–2" elevation under insert and no ash covering lower holes.
- Standing water inside insert → fully dry before lighting.

### Q. Fire starts hard or burns weakly.

- Ash level too high → scoop out cool ashes until lower holes are clear.
- No air gap underneath → re-level and raise insert 1–2" on gravel/pavers.
- Using softwood or trash → switch to dry, seasoned hardwood only.

### Q. Swivel grill wobbles or is loose.

- Set screws not tight → fully tighten both screws with provided Allen wrench.
- Post not seated properly → remove and re-insert post firmly between two top-course blocks.
- Blocks shifted → re-level top course and add construction adhesive if needed.

### Q. Too many sparks or popping.

- Burning pine, construction lumber, or wet wood → switch to seasoned hardwoods (oak, hickory, maple, ash, cherry) only.

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Explore the innovative **StarBBQ™** series, a premium collection of outdoor cooking solutions from Sunstone Metal Products. All StarBBQ™ products are proudly designed and engineered at our facility in North Austin, Texas. As a **PROUD TEXAS COMPANY**, we remain committed to delivering the highest quality in every product we create.

StarBBQ™ offers versatile options for campfire, camping, and backyard adventures, including smokeless fire pits, portable charcoal grills, and innovative grill inserts—all built with durable materials for reliable performance.



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