

# SURFACE TREATMENT

SOLUTIONS



Searing, Roasting, and Grill Marking  
with Advanced Afoheat™ Technology



**MARLEN**  
A DURAVANT COMPANY

# AFOHEAT™ SURFACE TREATMENT

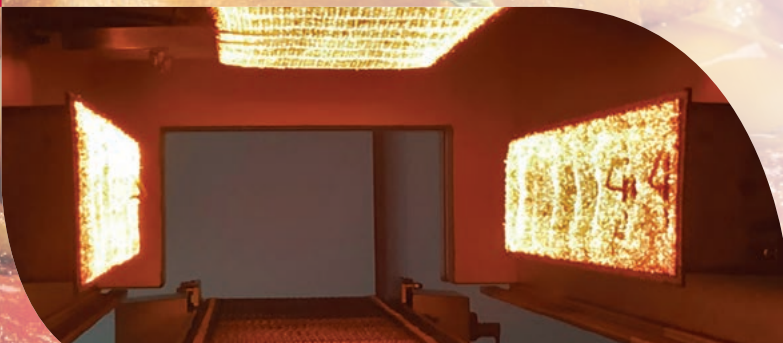
THE FINEST IN FLAME SEARING. PREMIUM ROASTING.  
PRECISION GRILL MARKING.

**A**foheat™ burner technology is first in class for premium flame searing, infrared roasting, and custom grill marking solutions for value-added meat, poultry, and plant-based foods. Accelerate natural color and enhance flavor profile with high temperature gas infrared, flame, or authentic grill marks. Our surface treatment equipment incorporates the latest in sanitary design, adjustability, optional smart controls system with icon-based operator interfaces, and safety features. Marlen's Afoheat burner system is at the core of the design, delivering unmatched reliability and safety, while maximizing product quality and consistency. Marlen's expanding portfolio of surface treatment options are innovatively easy to maintain, minimize energy utility requirements, reduce fire risk, and boost overall efficiency compared to others on the market.

The burner control system automatically adjusts to operator recipes with precision results on product color, texture, and temperature, so you can precisely achieve your desired results. This all translates to reduced training time, shorter start-up and cleaning times, and increased production. Marlen key advancements contribute to a lower Total Cost of Ownership – **Better Process...Better Food®**.



ENGINEER-SIMULATED AFOHEAT™ BURNER DESIGN STUDIES HAVE BEEN USED TO OPTIMIZE ENERGY AND THE CONSISTENCY OF YOUR FINISHED FOOD PRODUCT.



# ADVANTAGES OF AFOHEAT™ SURFACE TREATMENT SOLUTIONS

## FEATURES

SELECT SERIES    STANDARD SERIES

Metal fiber burner design is self-cleaning by pyrolysis without the use of chemicals	<input type="radio"/>	<input type="radio"/>
Gas pressure regulation and over-temperature alarms reduce the risk of explosion and fire	<input type="radio"/>	<input type="radio"/>
Fully integrated exhaust system maintains safe operating temperature and prolongs the life of the equipment	<input type="radio"/>	<input type="radio"/>
Door safety switches, guarding, and emergency stops ensure operator safety during operation and sanitation	<input type="radio"/>	<input type="radio"/>
Remote monitoring, VPN login for maintenance, and connections for ever-evolving IoT and Manufacturing 4.0	<input type="radio"/>	<input type="radio"/>
Hygienic cable routing	<input type="radio"/>	<input type="radio"/>
Optional intuitive icon-based touchscreen for recipe selection, maintenance, and sanitation for multilingual workforces	<input type="radio"/>	<input type="radio"/>
Optional fat separator removes fat from the exhaust air through easily accessible stainless filters	<input type="radio"/>	<input type="radio"/>
Constant water flow prevents grease buildup in drip pans for safe operation and easy cleanup	<input type="radio"/>	<input type="radio"/>
Conveyor with laser-guided height regulation allows for on-the-fly adjustments for product clearance and optimized surface treatment	<input type="radio"/>	
Upgraded gas train with independent blowers control pressure to each burner to fine-tune intensity and gas usage	<input type="radio"/>	
Removable product conveyor pulls completely away from machine facilitating sanitation for faster cleanup	<input type="radio"/>	
The machine is designed according to the highest safety compliance guidelines in the EMEA and APAC regions. CE approved.	<input type="radio"/>	





## FLAME SEARING

- Top and bottom of product surface receives direct flame contact
- Product appearance features artisan color; imparts "char" flavor
- Ideal for BBQ style and grilled veggies
- Burns the surface of meat and vegetables with longer dwell time
- Optimal distance to product surface 1" - 4" (25 mm - 100 mm)

## INFRARED ROASTING

- Top of product surface receives intense radiant infrared heat
- Product appearance features uniform color; imparts "roasted" flavor
- Ideal for deli meats, sous vide, and novelty products
- Blisters the surface of meat and vegetables with longer dwell times
- Optimal distance to product surface 2" - 3" (50 mm - 75 mm)
- Adjustable product flip used for top and bottom surface treatment

## GRILL MARKING

- Control of grill marker temperature from 392° F (200° C) to 1,292° F (700° C)
- Stainless steel rings are heat resistant to 2,192° F (1,200° C), and designed for prolonged life
- Customizable branding patterns and pitches include floating rings, hash, diamond, or solid roller marks
- Optional pre-drying burners available for wet product
- Options for dual-sided grill marking
- Available as a stand-alone solution or fully integrated machine with additional burners



ULTRA-HYGIENIC

# DESIGN



INTEGRATED BELT WASH



REMOVABLE FAT SEPARATOR



HYGIENIC CABLE MANAGEMENT



HYGIENICALLY DESIGNED SLOPED SURFACES FOR WATER RUNOFF



REMOVABLE PRODUCT CONVEYOR  
IN SANITATION POSITION



# TECHNICAL SPECIFICATIONS

Model	Standard Available Belt Widths*	Power per Burner at 100% Capacity**	Description†	Speed Capacity (variable)
Flame Grill	12" (300 mm), 16" (400 mm) 24" (600 mm), 40" (1,000 mm), 60" (1,500 mm)	97 kW = 330,977 BTU (up to 40") 104 kW = 345,862 BTU (over 40")	<b>STANDARD SERIES FEATURES</b> Top & bottom burners with integrated grill marker	Up to 80' (24 m) per minute
Flame Searer	12" (300 mm), 16" (400 mm) 24" (600 mm), 40" (1,000 mm)	56 kW = 191,079 BTU (up to 40") 72 kW = 245,675 BTU (over 40")	<b>SELECT SERIES FEATURES</b> Top & bottom burners	Up to 80' (24 m) per minute
Infrared Roaster	12" (300 mm), 24" (600 mm), 40" (1,000 mm)	46 kW = 156,957 BTU (up to 40")	<b>SELECT SERIES FEATURES</b> Top & side burners	Up to 65' (or 20 m) per minute
Hybrid	12" (300 mm), 24" (600 mm), 40" (1,000 mm)	46 kW = 156,957 BTU (IR up to 40")	<b>SELECT SERIES FEATURES</b> Top IR & bottom flame	Up to 65' (or 20 m) per minute
Grill Marker	24" (600 mm), 40" (1,000 mm)	56 kW = 191,079 BTU (up to 40") 72 kW = 245,675 BTU (over 40")	<b>SELECT SERIES FEATURES</b> Top only burners; 1-2 standard select features	Up to 50' (or 15 m) per minute

\* Custom widths from 8" (200 mm) to 72" (1,800 mm)

\*\* Most recipes utilize only 30-80% of the burner capacity

† Customized based on capacity requirements

INFRARED TOP & SIDES



FLAME SEAR TOP & BOTTOM



INFRARED TOP



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