

# RAPIDFLOW

LINEAR  
OVEN

SOLUTIONS



Marlen's High Temperature, High  
Velocity Air Impingement Oven



**MARLEN**

A DURAVANT COMPANY

# MAXIMUM DURABILITY

## HIGH-TEMPERATURE HIGH-VELOCITY AIR IMPINGEMENT FOR RAPID BROWNING & AIR FRYING

**M**arlen's Rapidflow Linear Oven is one of our most versatile cooking solutions combining the benefit of both high temperatures and high-velocity air impingement to brown and air fry food products as tall as 8" (203 mm). Our Rapidflow ovens feature the structural durability of an independent inner skin design that provides durability along with safety and an ultra-hygienic design. Through the use of computational fluid dynamics and 3D modeling, these ovens are also designed with the most efficient airflow-control for optimal results.

High-velocity airflow is at the heart of the Rapidflow oven's design. Both bidirectional and variable speed fans enable optimal airflow settings for impingement or convection cooking. The airflow envelopes irregularly shaped products with uniform energy. Air passing through the heat exchanger is directed into the cook zone in directionally forward, reversing, or combination patterns for rapid, uniform cooking, browning or air frying of any product. The modular design expands capacity and offers multiple independently controlled zones to optimize your process and add flexibility.

Installations around the world process a wide range of products, from crispy pork skin ham and uniform smoked turkey to golden brown pastry bites. Additionally, the oven's versatile airflow pattern is optimal for air frying and cooking ready-to-eat food items such as meatballs, chicken wings, nuggets, and vegetables.





## RAPID BROWNING:

Impingement air is one of several common methods used to develop natural color on food products. Other methods are direct flame, contact searing, radiant infrared heat, and oil frying. With advancements in Marlen's oven technology and natural browning agents, a whole range of authentic colors and surface effects can be achieved faster, more efficiently and with greater flexibility. This enables processors to create a range of products with subtle differences in appearance, ranging from products traditionally made at home to those prepared by top chefs. The high-velocity fans help dry and crisp the product's surface for golden, crispy texture. The high temperature air accelerates the natural browning effect, shortening the process time and maximizing yield.

## AIR FRYING:

Marlen's Rapidflow Linear Oven is a perfectly adapted industrial solution for replicating a deep-fried product without submerging the product in oil. The impingement air movement within this linear oven circulates hot air at high speed upon the product, thereby producing a crispy brown result. An oxygen sensor is integrated with the oven's Steam Overheat Protection System. This allows the industrial air fryer to operate at higher operating temperatures resulting in faster cooking times. While products brown nicely without the use of oil, we do offer an optional oil applicator or browning agent which enhances browning results.





# ADVANTAGES OF RAPIDFLOW OVENS

- High temperature, PID controlled temperature range up to 650° F (343° C)
- High speed impingement air to roast, sear, brown, bake, and air fry
- Increased aperture for large profile deli products up to 8" (203 mm)
- Configurable airflow components for Up, Down, and Oscillating for air balance
- Inner chamber design "free floats" from main frame to allow for thermal expansion
- Integrated heat source with up to 60 air exchanges every 2.5 seconds for improved browning
- Ewon for remote monitoring, login for maintenance, and data logging capabilities for the ever-evolving IIoT and Industry 4.0
- Steam Overheat Protection System for safe cooking with high temperature
- Ultra-hygienic design with integrated Clean-In-Place (C.I.P.) System and belt wash
- Optional no-leak patented sealed electrical boxes withstand 1350 PSI direct spray to edge of silicon seal
- Optional product flip for multi-zone ovens
- Optional spray systems for application of oil, browning agents or liquid smoke



HIGH TEMPERATURE, P.I.D. CONTROLLED  
TEMPERATURE RANGE UP TO 650°F (343°C)

# ULTRA-HYGIENIC

# DESIGN



8-PORT STAINLESS STEEL BLOCK



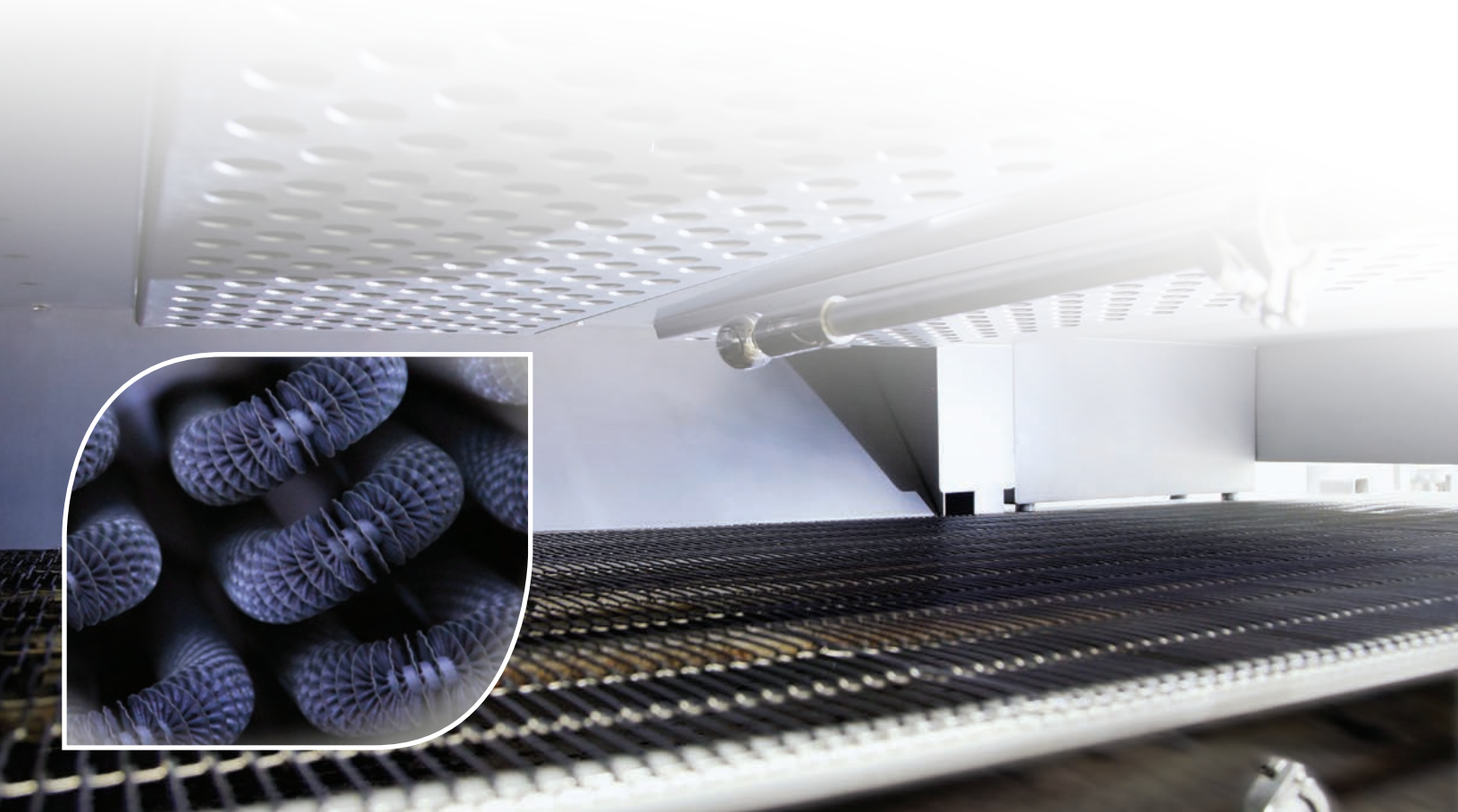
ICON-BASED INTUITIVE HMI



HYGIENIC CABLE MANAGEMENT SYSTEM



PATENTED NO-LEAK SEALED ELECTRICAL BOX



# RAPIDFLOW SPECIFICATIONS:

## TECHNICAL SPECIFICATIONS:

MODEL	BELT WIDTH	CIRCULATION FANS	MACHINE LENGTH	MACHINE WIDTH	MACHINE HEIGHT
Single Zone	40"	3	15.67' 4.78 m	7.76' 2.37 m	9.5' 2.9 m
Single Zone	60"	4	15.55' 4.74 m	9.7' 2.95 m	10.18' 3.10 m
Dual Zone	40"	6	25.67' 7.82 m	8.16' 2.49 m	8.75' 2.67 m
Dual Zone	60"	8	26.27' 8.0 m	9.69' 2.95 m	10.19' 3.11 m

Note: Models available with either gas or electric heating.

## UTILITY SPECIFICATIONS:

MODEL	ELECTRICAL POWER UTILITIES	WATER	DRAINS	STEAM	COMPRESSED AIR	EXTRACTION
Single Zone	USA: 480 VAC, 3 Ph, 150 Amp, 60 Hz EUR: 380 VAC, 3 Ph, 200 Amp, 50 Hz AUS: 415 VAC, 3 Ph, 175 Amp, 50 Hz	½" (12 mm) NPT main supply	4" (100 mm) Overflow	1-½" (40 mm) NPT Inlet 50 lbs/hr cont. (25 kg /hr)	1/2" (12 mm) NPT Inlet 90 PSI (6 Bar)	15" (380 mm) Outlet 2000 CFM (50 m³/min)
Dual Zone Gas	USA: 380 VAC, 3 Ph, 50 Amp, 50 Hz Each Zone Requires: Up to 500,000 BTU/Hr (146 KW) at 2.0-7.0 PSI (138-485 mbar) 1.0" (38 mm) NPT	½" (12 mm) NPT main supply	3" (75 mm) Oven	1" (25.4 mm) NPT Inlet 260 Lb (113 kg) per tankfill at 40 PSI (2.8 bar)	1/2" (12 mm) 80 PSI (5.5 bar) Up to .1SCFM (.17m³/hr)	Up to 3500 CFM (30 m³/min) Each
Dual Zone Electric	USA: 480 VAC, 3 Ph, 450 Amp, 60 Hz EUR: 380 VAC, 3 Ph, 600 Amp, 50 Hz AUS: 415 VAC, 3 Ph, 525 Amp, 50 Hz	½" (12 mm) NPT main supply	4" (100 mm) Overflow Sanitary	1.5" (40 mm) NPT Inlet 100 lbs/ hr Continuous (50 kg/hr)	1/2" (12 mm) 90 PSI (6 bar)	15" (380 mm) Outlet 2000 CFM (50 m³/min)



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