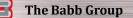
# **Corporate Profile:**



- 4<sup>th</sup> generation family-owned
- Since 1918
- 75,000ft<sup>2</sup> (7,000m<sup>2</sup>) Facility in Raynham MA
- 15,000ft<sup>2</sup> (1,400m<sup>2</sup>) Test Baking Facility











## Babbco Makes Ovens for the Production of...

- Bread & Rolls
- Bagels
- Pies, Cakes, Muffins
- Cookies, Crackers
- Baked Snacks
- Pizza, Flat Breads
- Artisan Breads
- Roasted Vegetables
- Filled Sandwiches
- And More

The Babb Group







## Babbco Produces Multiple Oven Types



**Direct-Fired** 



**Indirect-Fired** 



Air Impingement



Infrared



**Radiant Tube** 



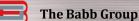
Thermal Oil



Electric



Hybrid



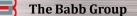




## **Transition to Zero Emissions Oven**

- Of the multiple oven types that Babb offers, the AIR IMPINGEMENT lends itself most readily to electrification or use of hydrogen burners
- Air impingement is a flexible heating format suitable for many, but not all, bakery products
- Certain bakery products require high heat or alternate heat transfer/ transport methods
- Substantial design challenges remain in converting other oven types to zero emissions







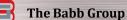


#### Multi-Fuel Hybrid Technology • Gas & Electric Clean Energy Solutions • Same Superior Performance

# **OcleanBake**

- Reduce or eliminate carbon emissions
- Achieve sustainability objectives
- Suitable for many bakery products with no change to existing process









# Easing The Transition – Multi-Fuel Oven

- Babb has developed a multi-fuel or "hybrid" oven design whereby heat can be generated from standard fuels (natural gas, propane, hydrogen, etc.) or electricity
- The multi-fuel design can provide lower risk of entry for existing product processes, allowing active switching from one energy source to the other at a later date
- Hybrid offered three ways:
  - All electric
  - Gas/hydrogen & electric
  - Gas & electric "ready"
- Allows "future-proof" investment



#### IBIE 2023 "Best in Baking" Award



#### Babbco Innovation Center - Real World Validation

- 15,000ft<sup>2</sup> (1,400m<sup>2</sup>) Tech Center
- Three (3) industrial ovens:
  - Hi-temperature
  - Band
  - Air Impingement
- Electric oven coming online Fall 2023:
  - Product bake characteristics can be examined gas vs. elec
  - Steam injection available where bake chamber humidity a concern



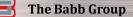




## **Interim Steps to Lower Emissions**

- Lower emissions might be achieved in a shorter timeframe by active oven exhaust control
- Most bakery ovens typically over-exhaust and are extremely inefficient
- Development must be done but modern sensors are now available for use















Any oven. Any way. Anywhere.

#### The Babb Group of Companies

