



# 1600 Series Impinger® Low Profile Conveyorized Oven

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### Models

- |                                     |                                     |                                     |                                     |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> 1600-000-U | <input type="checkbox"/> 1622-000-U | <input type="checkbox"/> 1628-000-N | <input type="checkbox"/> 1634-000-E |
| <input type="checkbox"/> 1601-000-U | <input type="checkbox"/> 1623-000-U | <input type="checkbox"/> 1629-000-N | <input type="checkbox"/> 1635-V00-E |
| <input type="checkbox"/> 1621-000-E | <input type="checkbox"/> 1624-000-N | <input type="checkbox"/> 1633-000-E | <input type="checkbox"/> 1636-V00-E |

Lincoln *Impinger* Conveyor Ovens are the premier continuous cook platform for the food service industry. Using the latest advancements in air impingement technology, *Impinger* ovens allow for rapid heating, cooking, baking, and crisping of foods, typically done two to four times faster than conventional ovens.



### Benefits

#### Faster Bake Times

- Improved Response to Customer
- Advanced Air Impingement Enhances Product Quality and Uniformity
- Optional FastBake Technology Reduces Cook Time by Up to An Additional 35% With No Food Quality Loss or Noise Increase

#### Easier Operation

- Digital Controls with Single On/Off Switch
- Microprocessor Controlled Bake Time/Conveyor Speed
- Locked Setting to Prevent Unintended Changes
- Fluorescent Display Indicating Temperature, Belt Speed, Thermostat, and Diagnostic Messages

#### Easier Cleaning

- Front Door for Finger Access and Removal
- Removable Conveyor Through Side Opening

#### Unparalleled Support

- Customer-specific Finger Setup for Menu Flexibility
- Research and Applications Team Help Achieve Ideal Cooking Results
- Manitowoc Star Service Committed to Owner Satisfaction

### Specifications

#### General

Stainless Steel Top, Front and Sides  
 40" (1,016 mm) Long Baking Chamber  
 Front Removable Fingers  
 Stackable Up To Two High  
 Includes Oven Start-Up/Check-Out  
 by Manitowoc STAR Authorized  
 Service Agent

#### Conveyor

32" (813mm) Wide x 73" (1,854mm) Long  
 Side Removable  
 Product Stop  
 One to Thirty Minute Cook Time  
 Reversible  
 Indirect Drive with AC Motor

#### Cooking

Customer Specific Finger Setup  
 Temperature Range 250°F to 600°F  
 (127°C to 316°C)  
 Front Loading Glass Access Door  
 with Cool to the Touch Handle  
 Digital Control Panel

#### Optional

FastBake Technology Reduces Cook Time  
 by Up to An Additional 35% with No  
 Food Quality Loss or Noise Increase  
 Entry and Exit Shelves  
 Flexible Gas Connector  
 Split Belt



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## Gas Supply Pressure Recommendations

| Gas Type | Supply (Inlet) Pressure (mbar)                         | Recommended Minimum Gas Pipe Size |
|----------|--|-----------------------------------|
| Natural  | 7-14" WC (2.2 kPa / 22.4 mbar - 3.5kPa / 34.9 mbar)    | 2" (51 mm)                        |
| LP       | 11-14" WC (2.7 kPa / 27.36 mbar - 3.5 kPa / 34.9 mbar) | 2" (51 mm)                        |

\*Gas supply pressures are dependent on local gas type and on all applicable local codes. Agency approved flexible connection to each oven must be minimum  $\frac{3}{4}$ " (19 mm) NPT and length must not exceed six (6) feet (1829 mm).

## Electrical Service

Each oven deck requires voltage, phase and hertz as indicated by model number. Neutral must be grounded at electrical service and receptacle properly polarized. Gas 120V units have a cord with NEMA 5-15 plug. All other models have terminal block connections. It is recommended that a separate circuit breaker be provided for each oven deck.

## Recommended Minimum Clearances

Rear of oven to combustible surface: 6" (152 mm). Clearance on each side from other cooking equipment: 24" (610 mm). Clearance required to remove conveyor for cleaning: 11' (3553 mm).

## Warranty

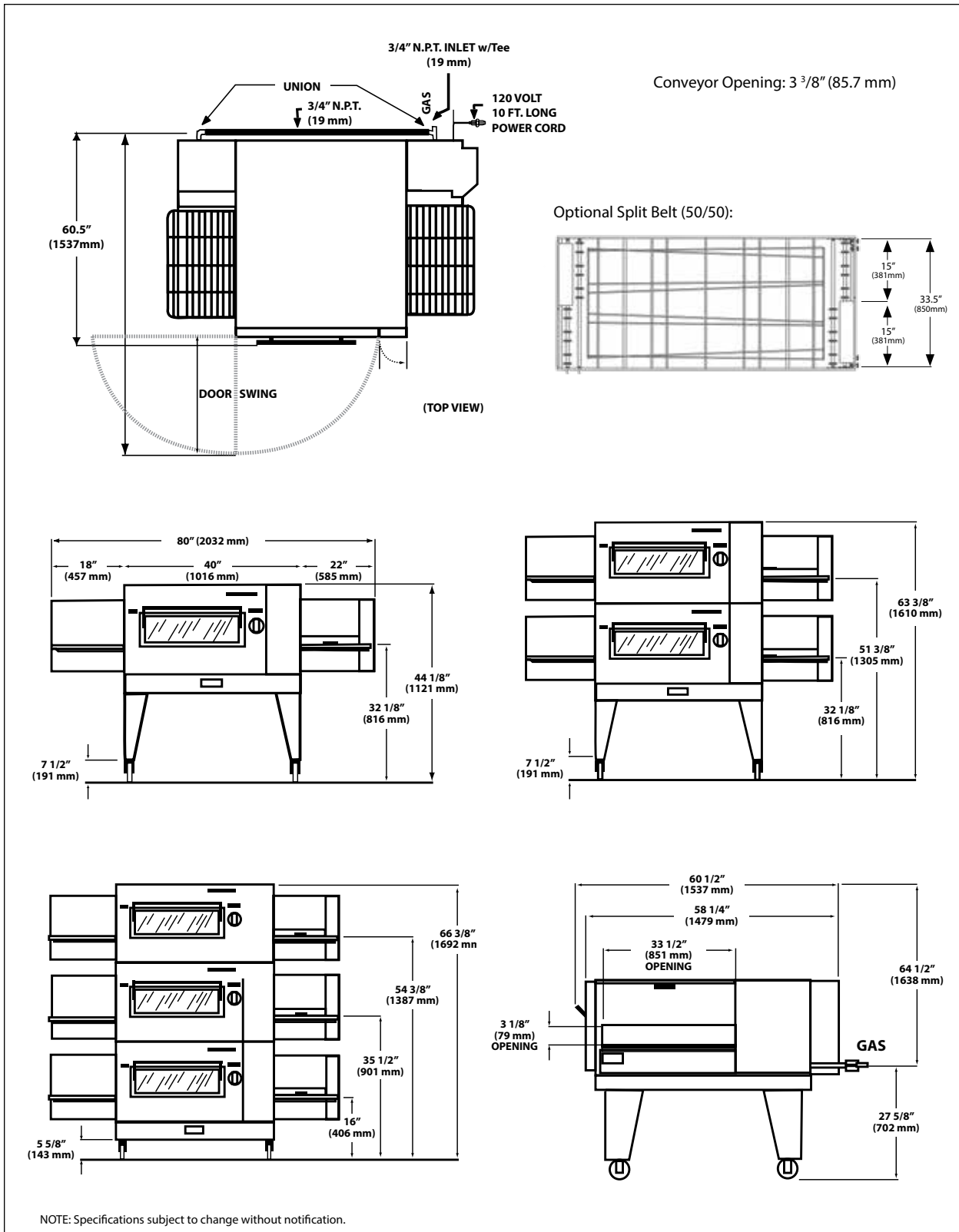
All new *Impinger* ovens installed in the United States and Canada come with a one (1) year parts and labor warranty starting from the date of start-up/check-out. All ovens installed in locations other than the US and Canada are warranted for one (1) year parts and ninety (90) days labor starting from the date of start-up/check-out. Start-up/check-out must occur within 24 months of date of manufacture.

## General Information

| All 1600 Models | Length           | Depth                           | Height Single                   | Height Double Stacked           | Height Triple Stacked           |
|-----------------|------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                 | 80"<br>(2032 mm) | 60 $\frac{1}{2}$ "<br>(1537 mm) | 44 $\frac{1}{8}$ "<br>(1121 mm) | 63 $\frac{3}{8}$ "<br>(1610 mm) | 66 $\frac{3}{8}$ "<br>(1686 mm) |

| Model Number | Agency         | Utility  | Input Rate                         | Voltage | Hertz | Phase | Supply |
|--------------|----------------|----------|------------------------------------|---------|-------|-------|--------|
| 1600-000-U   | UL EPH/CSA     | Natural  | 110,000 BTU<br>32.2 kW<br>(116 MJ) | 120     | 60    | 1     | 3      |
| 1633-000-E   | UL EPH//AGA/CE | Natural  |                                    | 230     | 50    | 1     | 3      |
| 1635-V00-E   | UL EPH         | Natural  |                                    | 220     | 60    | 1     | 5      |
| 1601-000-U   | UL EPH/CSA     | LP       |                                    | 120     | 60    | 1     | 3      |
| 1634-000-E   | UL EPH/AGA/CE  | LP       |                                    | 230     | 50    | 1     | 3      |
| 1636-V00-E   | UL EPH         | LP       |                                    | 220     | 60    | 1     | 5      |
| 1621-000-E   | CE             | Electric | 22 kW                              | 400/230 | 50    | 3     | 5      |
| 1622-000-U   | CUL/UL/UL EPH  | Electric |                                    | 120/208 | 60    | 3     | 5      |
| 1623-000-U   | CUL/UL/UL EPH  | Electric |                                    | 120/240 | 60    | 3     | 5      |
| 1624-000-N   | UL EPH         | Electric |                                    | 120/220 | 60    | 3     | 5      |
| 1628-000-N   | UL EPH         | Electric |                                    | 380/220 | 50    | 3     | 5      |
| 1629-000-N   | UL EPH         | Electric |                                    | 415/240 | 50    | 3     | 5      |

NOTE: Panel setups are added as kit numbers to the end of the model number to complete the oven order; (Example: 1600-000-U-K1819 is a 1600-000-U with standard setup, left to right.)

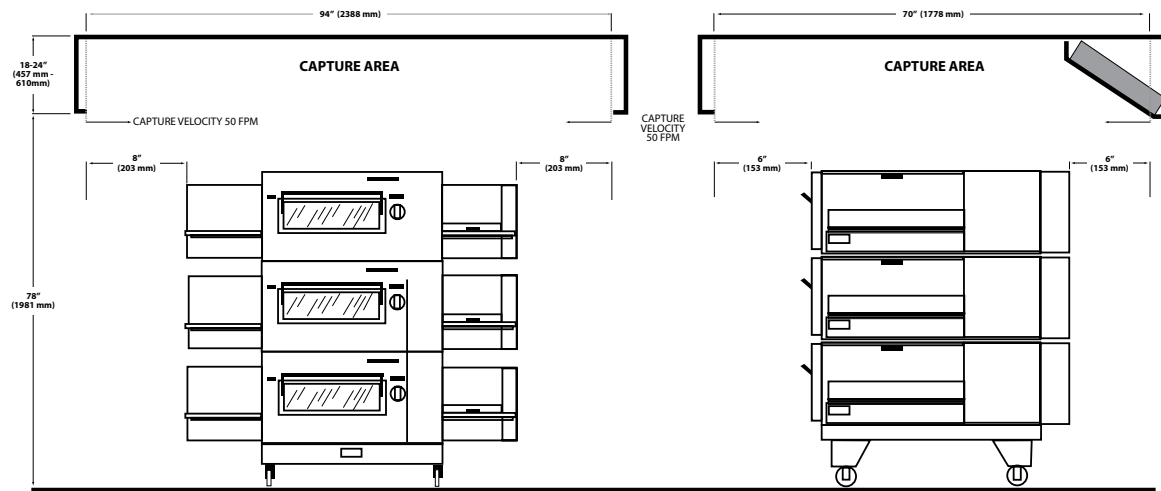


## Capacity Estimates | Pies Per Hour

| Pie Size    | BAKE TIME |         |        |         |        |         |        |         |        |
|-------------|-----------|---------|--------|---------|--------|---------|--------|---------|--------|
|             | 3 min.    | 3½ min. | 4 min. | 4½ min. | 5 min. | 5½ min. | 6 min. | 6½ min. | 7 min. |
| 12" (30 cm) | 182       | 155     | 135    | 120     | 108    | 99      | 90     | 84      | 78     |
| 14" (36 cm) | 115       | 99      | 87     | 88      | 69     | 63      | 58     | 53      | 50     |
| 16" (41 cm) | 101       | 87      | 76     | 67      | 61     | 55      | 51     | 47      | 44     |

## Ventilation Requirements

Ventilation is required. Local codes prevail. These are the "authority having jurisdiction" as stated by the National Fire Protection Association, Inc., in NFPA 96-1994. Estimates of CFM requirements can vary from 2400 to as high as 6000 CFM exhaust. In all cases the ambient temperature around the oven must not exceed 95°F (35°C) when the oven is operating. **This information is shown as a guideline for ventilating the Impinger® 1600 Ovens.**



1. Dimensions shown are for ovens without long extension shelves. **The outside end of the conveyor frame must be a minimum of eight (8) inches (203 mm) inside the canopy as shown.**
2. **The capture velocity across the lower edge of the canopy is to be 50 FPM at sides and front.**
3. Use filters at rear exhaust area of the hood, as shown. Do **not** just put an opening into a 4 sided canopy.
4. The ovens are to be centered in the canopy space left-to-right and front-to-back if possible.
5. A six (6) inch space at rear of oven is recommended for utilities.
6. Use of a Type I or Type II application and overall final installation is determined per local codes.
7. **Recommended 2400-3000 CFM exhaust**, typical, or higher per local codes; as a guideline to obtain adequate capture velocity.
8. **Recommended 80% of make-up air provided outside of the canopy** through perforated metal diffusers directed straight down... **not at the oven**; located at front, side or both.
9. **Room air diffusers must not be directed onto the oven and should be positioned a minimum of three (3) feet from the perimeter of the hood to keep airflow from affecting the oven.**

NOTE: Specifications subject to change without notification.