



# 1400 Series Impinger® I Single Belt Conveyorized Oven

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## Models

- |                                     |                                     |                                     |                                     |                                     |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> 1421-000-E | <input type="checkbox"/> 1447-000-E | <input type="checkbox"/> 1452-000-U | <input type="checkbox"/> 1454-000-N | <input type="checkbox"/> 1457-V00-B |
| <input type="checkbox"/> 1433-000-E | <input type="checkbox"/> 1450-000-U | <input type="checkbox"/> 1453-000-U | <input type="checkbox"/> 1455-000-N | <input type="checkbox"/> 1458-P00-E |
| <input type="checkbox"/> 1434-000-E | <input type="checkbox"/> 1451-000-U | <input type="checkbox"/> 1454-000-U | <input type="checkbox"/> 1456-V00-V |                                     |



## Benefits

- Faster bake times improve time of service.
- Advanced air impingement technology enhances bake quality and uniformity.
- Improved product flow during cooking reduces operation costs.
- Research and applications support for continued operational success.
- Manitowoc STAR Service Support is committed to ongoing customer satisfaction.
- FastBake™ Technology designed to bake up to 35% faster than other conveyor ovens without increased noise levels or loss of product quality! (Optional)

## Standard Features:

- Customer specific finger setups provide menu flexibility
- Stackable up to two (2) high
- 32" (812 mm) wide, 73" (1854 mm) long conveyor belt with product stop
- 40" (1016 mm) baking chamber
- Temperature is adjustable from 260° to 600° F (121° to 316° C)
- Conveyor speed is adjustable from one (1) minute to thirty (30) minutes cooking time
- Stainless steel top, front and sides
- Oven start-up/check-out by Manitowoc STAR authorized service agent included in price
- Digital control panel
- Front loading glass access door with cool to the touch handle
- Front removable fingers and side removable belt for easy cleaning
- Reversible conveyor

## Specifications

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.

### Easy to Operate:

- Digital controls with single on/off power switch.
- Microprocessor controlled bake time/conveyor speed.

- Improved view vacuum florescent readout displays set temperatures in degrees (F° or C°), conveyor belt speed, thermostat indicator light, and diagnostic messages for easy trouble shooting.
- All settings are automatically locked out to eliminate accidental changes.

### Easy to Clean:

- Front door for easy cleaning and removal of finger assemblies.
- Conveyor is removable through the right side opening.

### Optional Features:

- *FastBake*: Improve your bake time by up to 35% without increased noise levels or loss of product quality!
- Entry and exit shelves.
- Flexible gas connector.
- Split belt



## 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 - 3.5 kPa / 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 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 right side from other cooking equipment: 24" (610 mm). Clearance required to remove conveyor for cleaning: 11' (3553 mm).

## Warranty

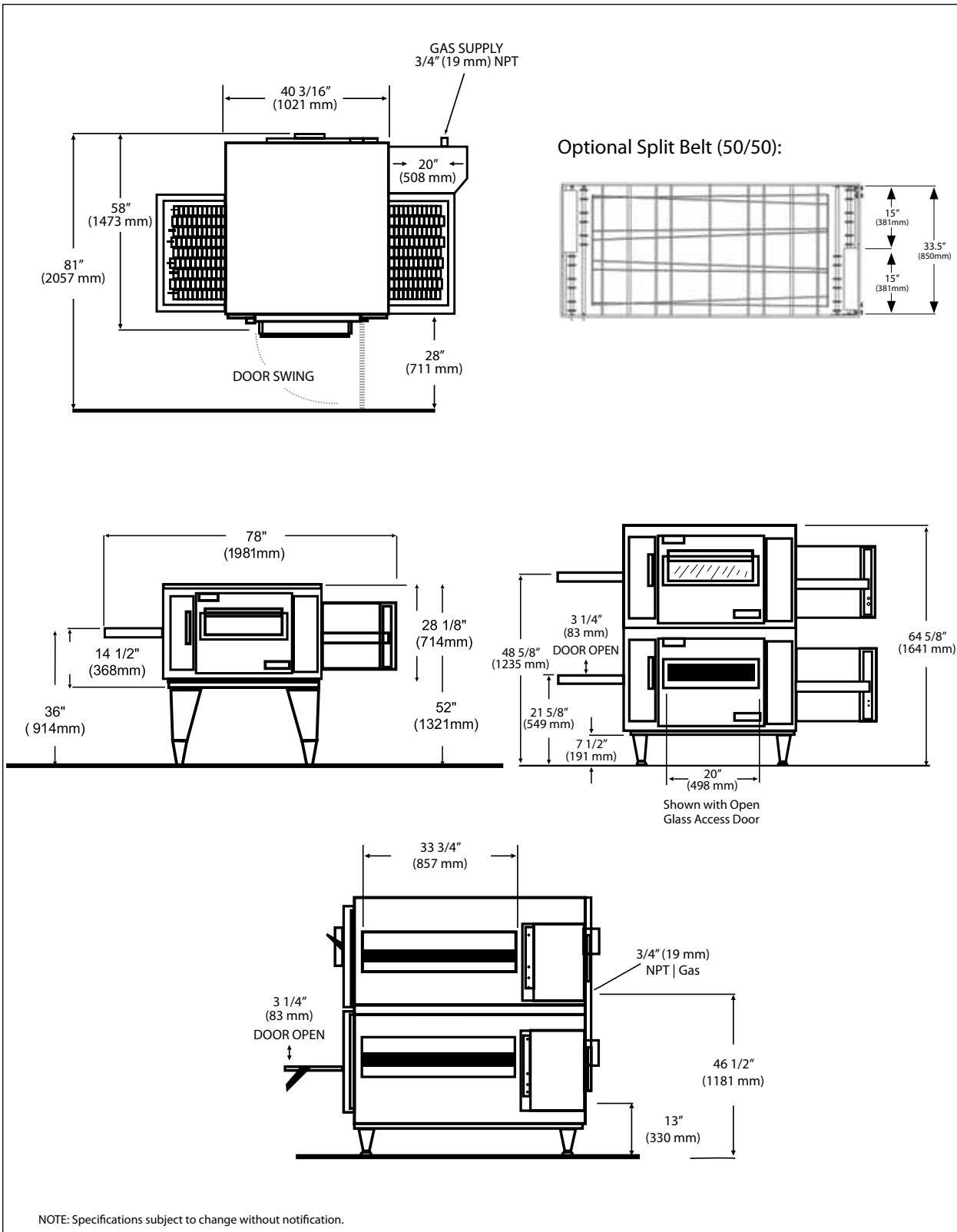
All new *Impinger* ovens installed in the United States and Canada come with a one (1) year parts and labor warranty starting from the date of start-up/check-out. All ovens installed in locations other than in the US and Canada are warrantied for one (1) year parts and ninety (90) days labor starting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

## General Information

All 1400 Models	Length	Depth	Height Single	Height Double Stacked
	78" (1981 mm)	58" (1473 mm)	52" (1321 mm)	64 5/8" (1641 mm)

Model Number	Agency	Utility	Input Rate	Voltage	Hertz	Phase	Supply
1433-000-E	UL EPH/CE	Natural	120,000 BTU/Hr. 32.5 kW 126.6 MJ	230	50	1	3
1450-000-U	UL EPH/CSA	Natural		120	60	1	3
1456-V00-B	AGA/UL EPH	Natural		240	50	1	3
1434-000-E	NSF/CE	LP		230	50	1	3
1447-000-N	UL SPH	LP		220	60	1	3
1451-000-U	UL EPH/CSA	LP		120	60	1	3
1457-V00-B	AGA/UL EPH	LP	240	50	1	3	
1421-000-E	UL EPH/CE	Electric	27 kW	400/230	50	3	5
1452-000-U	UL EPH/UL/cUL	Electric		120/208	60	3	5
1453-000-U	UL EPH/UL/cUL	Electric		120/240	60	3	5
1454-000-N	UL EPH	Electric		380Y/220	50	3	5
1455-000-N	UL EPH	Electric		415Y/240	50	3	5
1458-000-E	UL EPH/UL/cUL	Electric		400	50	3	4

NOTE: Panel setups are added as kit numbers to the end of the model number to complete the oven order; (Example: 1450-000-U-K1801 is a 1450-000-U with standard setup, left to right.)

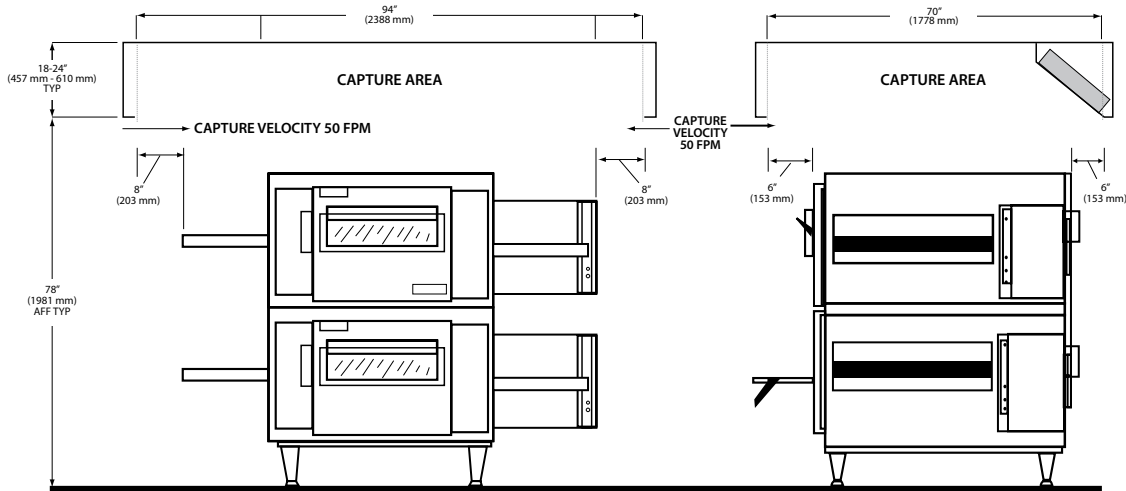


## Capacity Estimates | Pies Per Hour

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® 1400 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.