

# THERMADOR

EFFICIENT, MODULAR  
AND VERSATILE





## THE NEW THERMADOR BAKES ANY PRODUCT

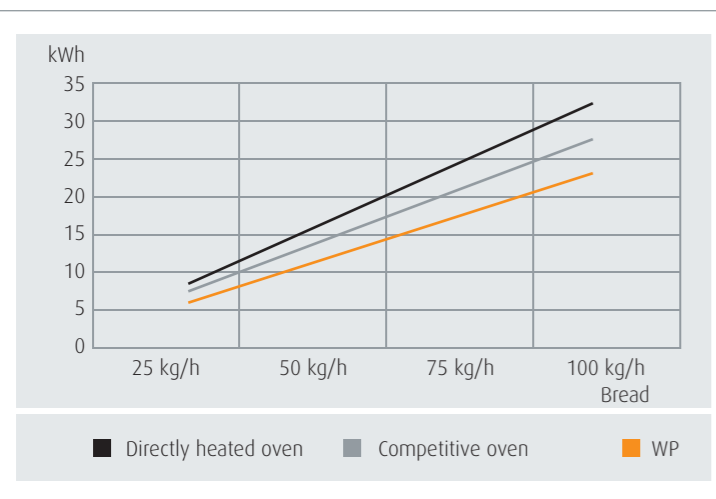
### Return of investment safety

Today, energy costs make up an ever-growing part of the total manufacturing costs for bread, cakes and pastries. Werner & Pfleiderer Industrial Bakery Technology takes into account this development with the new THERMADOR.

### THERMADOR tunnel oven – characteristics and advantages at a glance:

- Optimisation of the energy requirement in adaptation to the heat requirement of the product through continuously controlled heating gas circulation
- Further reduction of the energy consumption
- More efficient heat transfer technology
- Additional energy cost savings can be achieved through controlled rate of steam supply
- Optimum modular design reduces heating surface losses
- New type of combustion chamber and circulation systems increase efficiency and service lives, therefore reducing operating costs

### Energy consumption THERMADOR in comparison:



### Technology for 0-defect

Clear and logical oven control to avoid incorrect operation.

### Hygiene

No combustion gases in the baking compartment through indirect heating system.

### Energy saving

Low exhaust gas temperatures and the exemplary heat insulation guarantee efficient use of energy

### Space Saving

Baking compartment convection (Duotherm) in all oven zones or in conjunction with infrared oven zones reduce the baking times and thereby the required baking surfaces.

### Modular

The modular design allows individual oven configurations and the combination of Cyclotherm, Duotherm and Infrared. Subsequent oven extension with suitable modules is possible.

### Allrounder

THERMADOR is suitable for all freshly baked goods.

### Long distance runner

Maximum quality, sound finish and low maintenance requirement produce high availability.

### Optimum baking results

Product-adapted heating systems, rapid heat transfer, effective swathing, short baking times guarantee the production of premium quality.

### Efficient

Stable, reliable, low operating costs ensure rapid amortisation of investment costs.



# THERMADOR

## THE ALLROUNDER

### Four oven types for the entire product variety

The unique modular design allows oven combinations that leave nothing to be desired in terms of flexible use for a wide product range.

And the THERMADOR combines state-of-the-art baking technology and great economy with the known reliability and longevity of the oven technology of Werner & Pfleiderer Industrial Bakery Technology.

### Customer benefit in focus:

- Can be freely combined and is universal
- Closely-stepped modular system for product-based zone division
- For all freshly baked products
- Modular design from 9 to 60 m
- Up to 30% reduced baking times
- New technology for part-baked products

### THERMADOR CYCLO

Universal oven with closed Cyclotherm heating gas circulation system. Heat transfer to the baking goods is exclusively through indirect radiation. Each control zone can be independently regulated in top and bottom heat. Heating gas circulation is controllable.

- No drying out of the baking product.
- Always optimum moisture in the baking chamber



### THERMADOR CYCLO PLUS

Cyclotherm radiation oven with one or several control zones with increased infrared radiation in the top heat.

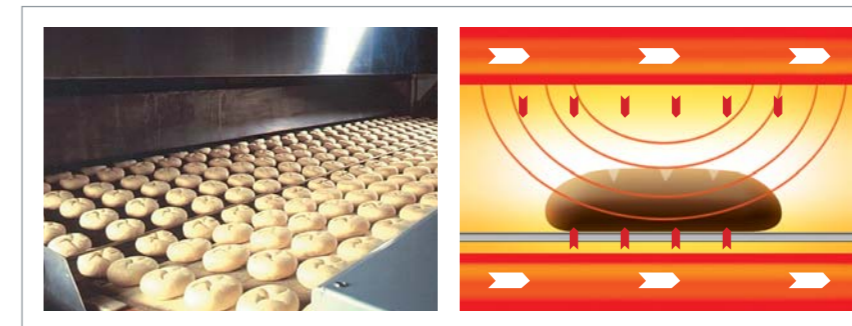
- Particularly suitable for part-baked goods without colouring
- Reduction of baking times through faster reaching of the core temperature
- High moisture content in the product possible
- Better product crumb and taste characteristics
- Baked goods keep fresh longer

### Infrared technology

Latest physical findings are utilized in the innovative baking technology by Werner & Pfleiderer.

With this new technology heat radiation is shifted into the infrared range. In the infrared range the baking goods receive the desired volume without browning of the product surface.

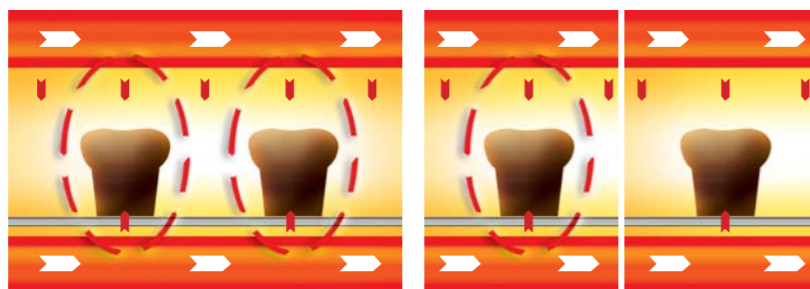
THERMADOR CYCLO PLUS complies with the strict requirements of the "Hygienic design" according to DIN EN 1672-2.



## THERMADOR DUO

The specialist for baking bread tin and sheet products. Extremely fast and intensive heat transfer is effected through convection (DUOTHERM) in all oven zones including the burner zones. Baking compartment circulation in each case is vertical either from the top down or vice versa. In addition, the circulation intensity can be controlled and individually adjusted to suit the baking goods.

- No uncontrolled extraction of moisture
- Extremely high heat transfer efficiency
- Considerable energy savings can also be used as a pure radiation oven
- Also available as PLUS version with infrared heat transfer



## THERMADOR VARIO

The THERMADOR VARIO is a combination of oven sections with pure radiation (Cyclotherm) and one or several oven sections with baking compartment circulation (DUOTHERM). This oven version is also available with one or several control zones with infrared heat transfer.

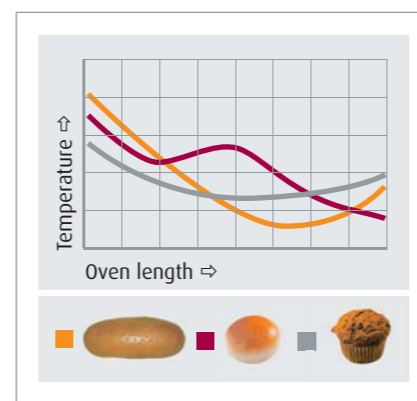


# MODULARITY COUNTS

### Modular control zone structure in accordance with optimum product baking curve.

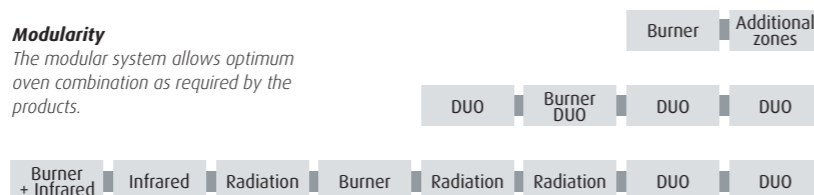
The THERMADOR oven system offers extraordinarily fine adjusting possibilities so that the correct temperature and moisture act on the respective baking product at the correct time in the baking process.

Examples for three characteristic heat requirement curves: mixed rye bread, soft rolls and Panettone.



### Modularity

The modular system allows optimum oven combination as required by the products.



# OVEN AUTOMATION

### Maximum value creation and absolute reproducibility

Increasing costs for personnel and competitive pressure demand automated solutions. Sensibly, the THERMADOR is therefore also available with a fully automated option in addition to the standard oven control.

The fully automated THERMADOR is based on state-of-the-art digital control technology.

### Simplest operation

Operation is performed from the monitor and easily understood through the use of soft key technology and baking process data of up to 99 different recipes can be saved in the memory.

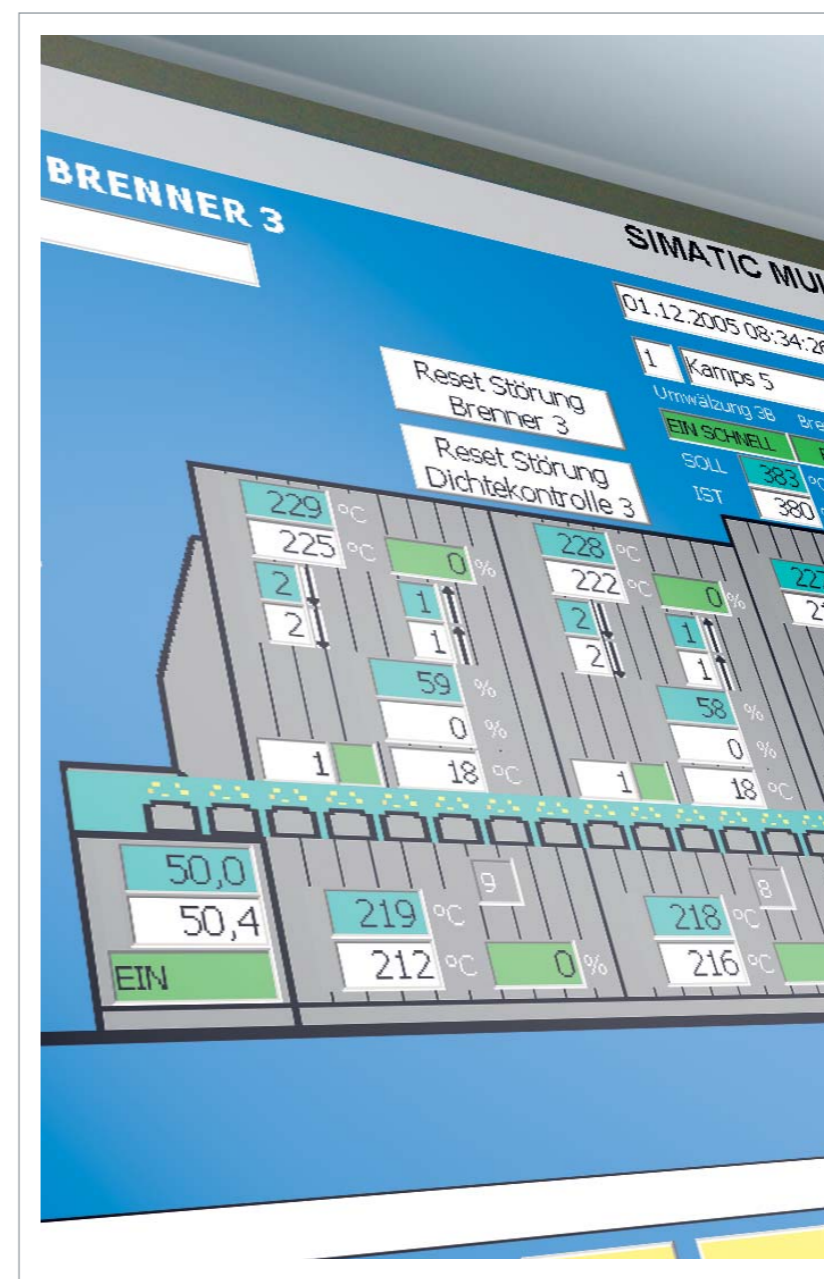
### Automatically controlled

Baking time, heating gas temperature, zone temperatures (separate for top and bottom heat) and steam rate are automatically set and controlled in accordance with the recipe concerned. All heating gas and swathe valves are electrically driven and integrated in the control.

### Everything under control

New process data is automatically set when the product type is changed (Product tracking). Gap recognition with automatic readjustment of all zones for top heat and bottom heat as well as activation of the DUO fans prevents heat soak when the oven is not fully loaded.

All operating data and the temperature profile across all zones as well as operating and fault messages are displayed on the monitor.



<b>Conveyor width</b>	[mm]	2 000	2 500	3 000	3 300	3 750	4 000
<b>Useful width</b>	[mm]	1 950	2 450	2 950	3 250	3 700	3 950
<b>Oven width</b>	[mm]	3 005	3 555	4 005	4 305	4 755	5 005
<b>Baking compartment length</b>	[mm]	9 000 – 60 000					
<b>Inlet rack length</b>	[mm]	950 / 1 400					
<b>Discharge rack length</b>	[mm]	1 650 / 1 950					
<b>Oven start and oven end</b>	[mm]	160 each					
<b>Conveyor height</b>	[mm]	760					
<b>Burner zone height</b>	[mm]						
CYCLOTHERM		2 500					
DUOTHERM		2 750					
<b>Oven zone height</b>	[mm]						
CYCLOTHERM		1 900					
DUOTHERM		1 900					
<b>Baking compartment height</b>	[mm]	260					
<b>Passage under swathe zone</b>	[mm]	150 / 165					
<b>Lengths and design swathe zone</b>							
Oven start 6,0 m		Swathe zone/pipes 1450 mm / 6 Rohre					
Oven start 4,5 m		Swathe zone/pipes 950 mm / 4 Rohre					
Oven start 3,0 m		Swathe zone/pipes 700 mm / 2 Rohre					
<b>Heating medium</b>		Natural gas, light fuel oil or electricity					
<b>Baking time control</b>		At the ratio of 1:4 (others on request)					
<b>Drive</b>		Frequency-controlled geared motor					
<b>Conveyor load</b>	[kg/m <sup>2</sup> ]	50 (higher load on request)					
<b>Conveyor design</b>							
CYCLOTHERM		Articulated round wire conveyor, Hinged steel plate belt, Stone plate conveyor					
DUOTHERM		Wide-meshed articulated flat wire conveyor					

## Sales

**WP Bakery Group USA**  
 1 Enterprise Drive, Suite 408  
 Shelton, CT 06484  
 PH: 203-929-6530  
 FX: 203-929-7089  
 info@wpbakerygroupusa.com  
 www.wpbakerygroupusa.com

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 Representations with service outlets are also present in all regions of the world.*