

mondial forni

# MULTI-DECK CONVECTION OVEN

MACS series



## Mondial Forni introduces the first and only Multi-Deck Convection Oven

After 20 years experience in Multi-Deck Ovens, Mondial Forni introduces the MACS concept, combining the baking efficiency and flexibility of Indirect Convection with compact Multi-Deck design, offering large baking surface on a small footprint. MACS Oven complements our comprehensive range of ovens, including the RADIUS indirect cyclotherm oven, the MATIC multi-deck indirect steam pipe oven and the FOCUS high temperature direct oven.

### Why Convection?

Convection has proven to be the most efficient baking system, providing low energy consumption and superior baking results for a variety of products ranging from croissant, muffin, cakes, pizza, tin bread, soft rolls and bread. Air turbulence around the product increases heat transmission and therefore reduces baking time.

Controlled air movement means uniform conditions throughout the baking area and consistency, batch after batch, day after day. The end result is a very uniform colour, regular product development and even moisture content.

Baking with air reduces the time to heat up the oven and there is less energy accumulated in the system: product changeover is therefore quick and efficient. Flash heat from radiating elements of conventional radiant ovens, which typically burns the first and last batch, is also avoided.

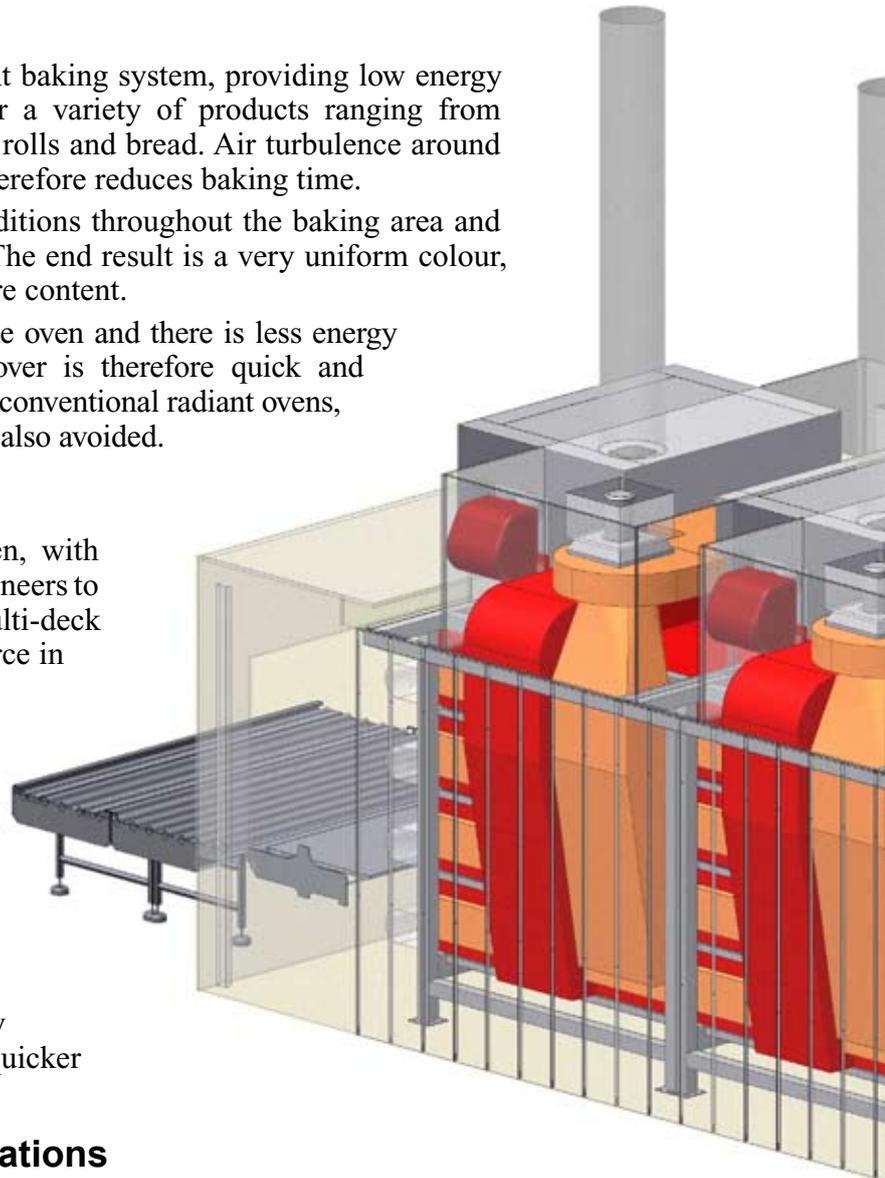
### Why Multi-Deck?

The increasing popularity of our Matic Oven, with more than 300 installations, convinced our engineers to provide an alternative baking system with multi-deck design. Space is a scarce and expensive resource in bakeries and in many cases tunnel ovens are not taking full advantage of the available height. Beside space, the compact design provides many points of consideration to the energy conscious baker:

- fully enclosed baking conveyors
- minimal external surface compared to the baking area, reducing heat loss to the ambient
- possibility to install centralized heat recovery systems serving multiple zones, for a much quicker payback

### Flexibility for High Volume Applications

MACS is a very sophisticated baking system and represents the most flexible choice for high volume automatic systems. Full control over baking parameters guarantees it will perfectly suit your present and future needs.

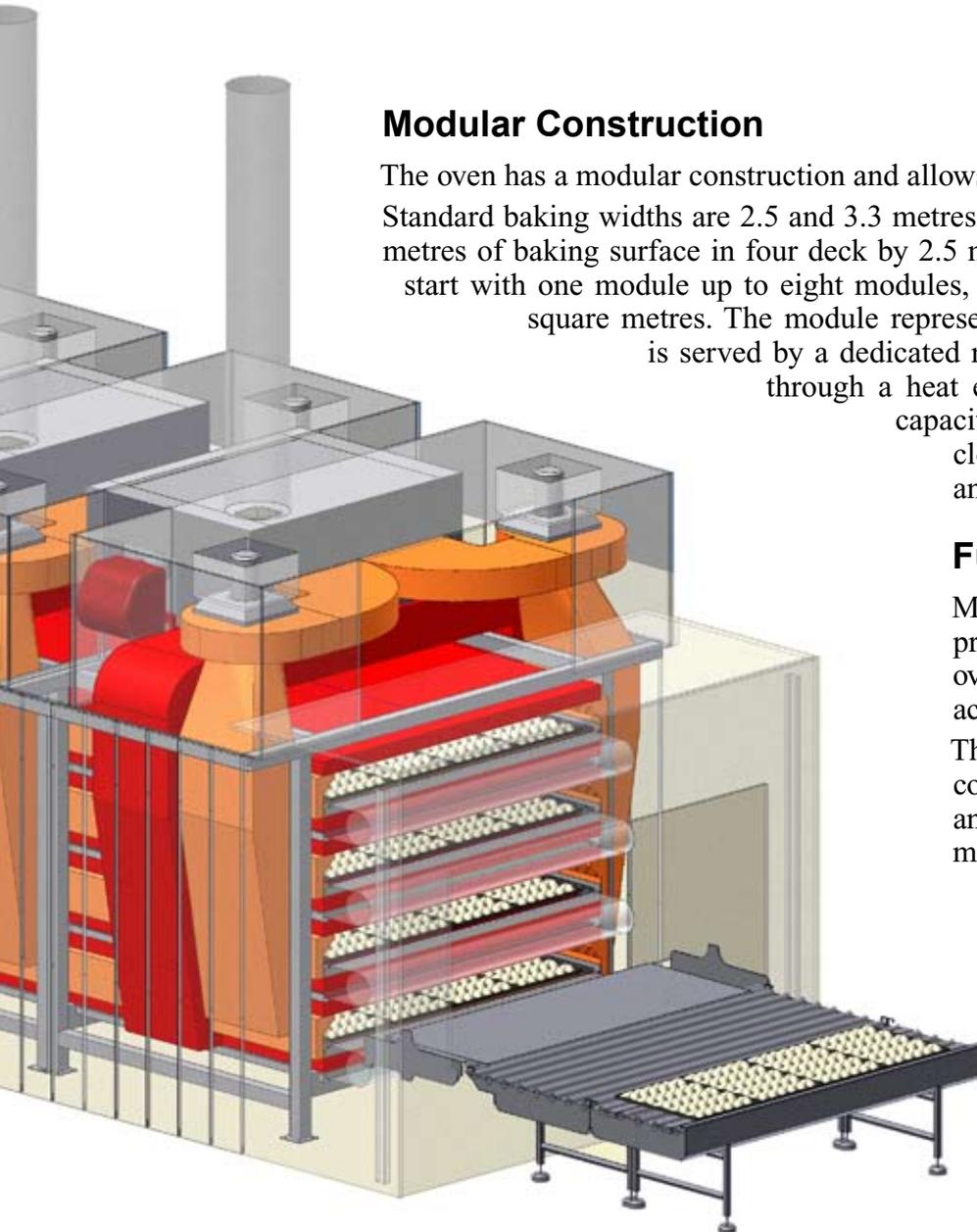




## Modular Construction

The oven has a modular construction and allows for easy and quick installation.

Standard baking widths are 2.5 and 3.3 metres. Each module offers 25 or 33 square metres of baking surface in four deck by 2.5 metres in length. Oven configurations start with one module up to eight modules, for a total surface of more than 260 square metres. The module represents an independent baking zone and is served by a dedicated modulating burner heating baking air through a heat exchanger (indirect heating). A high capacity blower circulates baking air in a closed loop to the four baking chambers and then onto the product.



## Full Baking Control

MACS is a very innovative oven and provides the operator with full control over baking parameters in order to achieve a fine tuning of baking profile.

The extensive use of servomotors combined with recipe management and a user-friendly graphic interface mean simple yet sophisticated control and supervision of the system. Each deck in each module has independent top and bottom control of air flow via adjustment dampers.

Control software allows for simultaneous regulation over multiple dampers, when a uniform adjustment is required for all decks in the zone, or can provide access to independent adjustment at single deck level.

Indirect convection offers the most accurate and flexible moisture control: twin dampers control moist air discharge and fresh air intake, in order to maintain the required moisture content. A steaming section is available as an option for the front zone.

The oven has a maximum baking temperature of 330°C, yet can rapidly achieve the lowest of baking heats, while offering uniform baking across the decks.

MACS 2.5											
Model	Decks	Modules	Baking surface m <sup>2</sup>	Decks dimensions mm			Overall dimensions mm			Rated power	
	nr.			a	b	h	A	B	H	kW	BTU/h
MACS 2.5 - 4/1	4	1	25	2.500	2.500	180 *	4.200	6.500	4.050	250	850.000
MACS 2.5 - 4/2		2	50		5.000			9.000		500	1.700.000
MACS 2.5 - 4/3		3	75		7.500			11.500		750	2.550.000
MACS 2.5 - 4/4		4	100		10.000			14.000		1.000	3.400.000
MACS 2.5 - 4/5		5	125		12.500			16.500		1.250	4.250.000
MACS 2.5 - 4/6		6	150		15.000			19.000		1.500	5.100.000
MACS 2.5 - 4/7		7	175		17.500			21.500		1.750	5.950.000
MACS 2.5 - 4/8		8	200		20.000			24.000		2.000	6.800.000

MACS 3.3											
Model	Decks	Modules	Baking surface m <sup>2</sup>	Decks dimensions mm			Overall dimensions mm			Rated power	
	nr.			a	b	h	A	B	H	kW	BTU/h
MACS 3.3 - 4/1	4	1	33	3.300	2.500	180 *	5.000	6.500	4.200	250	850.000
MACS 3.3 - 4/2		2	66		5.000			9.000		500	1.700.000
MACS 3.3 - 4/3		3	99		7.500			11.500		750	2.550.000
MACS 3.3 - 4/4		4	132		10.000			14.000		1.000	3.400.000
MACS 3.3 - 4/5		5	165		12.500			16.500		1.250	4.250.000
MACS 3.3 - 4/6		6	198		15.000			19.000		1.500	5.100.000
MACS 3.3 - 4/7		7	231		17.500			21.500		1.750	5.950.000
MACS 3.3 - 4/8		8	264		20.000			24.000		2.000	6.800.000

\* working height

