OVEN LINE

ROTOAVANT FB

FOR BREAD AND PASTRY

POLIN®

THE EVOLUTION OF HIGH-PERFORMANCE RACK OVENS

PERFECT, HIGH PRODUCTIVITY BAKING. FRONT ACCESS TO ALL PARTS ALLOWS OPTIMISED USE OF SPACES IN A LABORATORY

RotoAvant FB is the outcome of an innovative new vision. The evolution of our best rack ovens, created to bring into being a new flagship line that aims to become a benchmark in design and construction.

Uniquely flexible in production, frugal in consumption and perfect in the baking quality of every bread and pastry batch.

RotoAvant FB is easy to install because it is delivered pre-assembled (models 4676 and 80100 on request) and allows you to make the most of laboratory space because it was designed for front access to all parts when maintenance is carried out.

RotoAvant FB 6080

Designed and created in different versions (Smart, Flex Energy and Hi Control), it adapts to the specific and particular production requirements of each laboratory.
Its set of advanced features improve performance and simplify the operator's work.

All ovens in the line can connect to BakeApp 4.0, the interconnection software created by Polin to manage ovens remotely and obtain useful information on consumption, productivity and machine status.

1/SPACE

NOW YOU CAN MAKE THE MOST OF YOUR SPACE

Front access for maintenance

RotoAvant FB has been designed with a compact size and allows front access to the heating system (burner or heating elements), electrical panel and hydraulic systems. This allows installation in series, which optimises the use of space.

Side-by-side installation against the wall

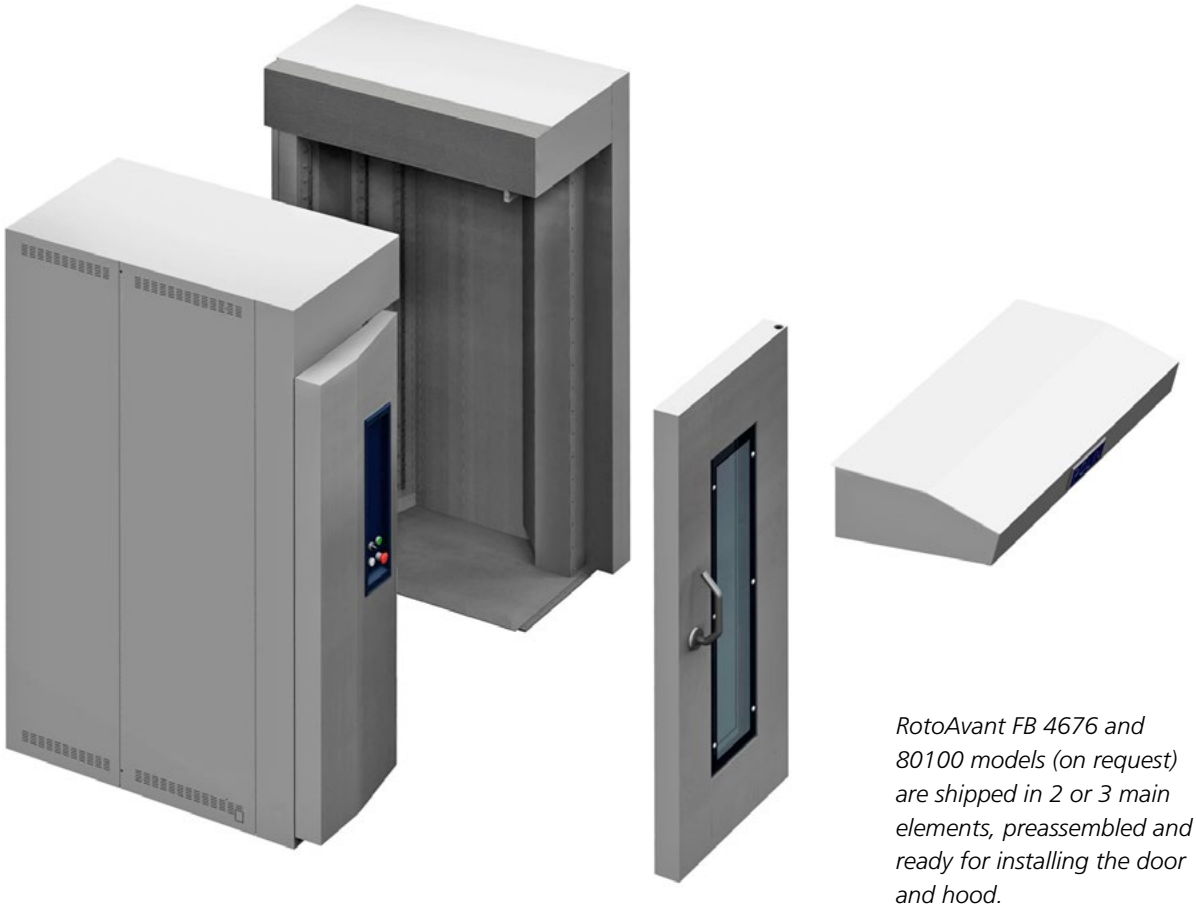
With front access in all models, each oven can be closed on three sides, allowing installation in side-by-side serial format and against the wall, thereby optimising use of the laboratory space.

QUICK INSTALLATION BECAUSE IT IS PREASSEMBLED

Quick and easy installation

RotoAvant FB 4676 and 80100 models have been designed to minimise assembly time and to provide you with an oven that is immediately ready for production.

They are shipped in 2 to 3 main elements (80100 model on request), preassembled and ready for installing the door and hood.
The assembly operations in a laboratory thus become easier and faster.



RotoAvant FB 4676 and 80100 models (on request) are shipped in 2 or 3 main elements, preassembled and ready for installing the door and hood.

UNIQUELY FLEXIBLE: OFFER MORE TO YOUR CUSTOMERS

All the functions needed to simplify production

RotoAvant FB improves production also through a series of functions designed to facilitate and optimise operation, such as:

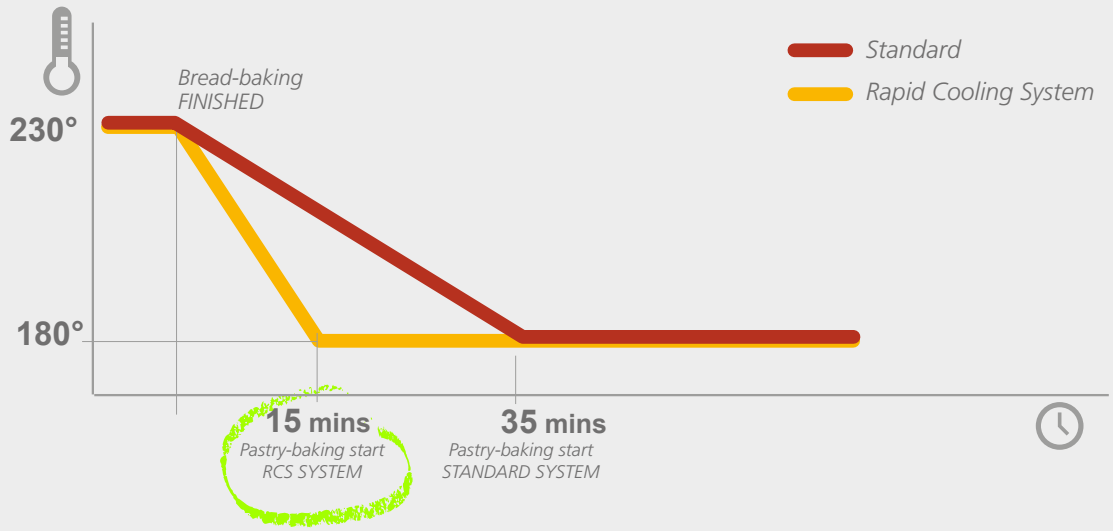
- Automatic start-up.
- The function that indicates the time needed to obtain the desired temperature in the oven when in stand-by or switched off.
- Simple programming of cycles by setting all the variables in each phase.
- Recipe storage.
- Recipe backup in models equipped with USB key.

An oven that increases your productivity

The rapid heating and cooling of RotoAvant FB allows quick changes of temperature. This helps boost productivity, with the assurance of getting an even more perfect product.

Rapid Cooling System: from baking bread to baking pastry in 15 minutes

The rapid cooling system drastically reduces the waiting time when switching from high to low-temperature baking. All done with the oven door closed, thus maintaining an unaltered ambient temperature in the bakery premises.



FRUGAL CONSUMPTION TO ACHIEVE REAL SAVINGS

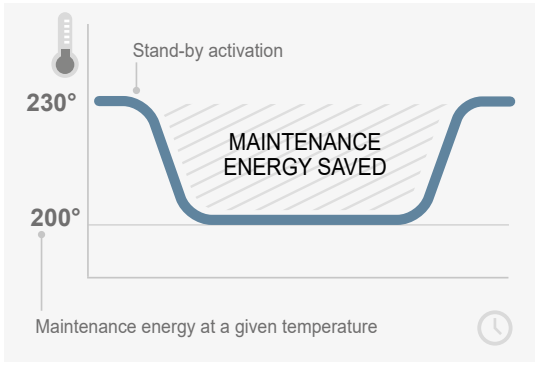
Equipped with a certified low-consumption heating system

RotoAvant FB has a High Efficiency System for heat generation. The optimised operation of the combustion chamber yields high performance, with a lower working temperature compared to normal combustion chambers. This reduces fuel consumption and increases durability.
The efficiency of the system is certified by DVGW, one of the most authoritative European standards bodies

Efficiency certificate filed with the DVGW certification body

No more waste in non-productive phases

The Stand-by mode allows power consumption during non-productive phases to be reduced to a minimum, with the oven remaining in a state of readiness for a quick restart.



Heat loss is reduced to a minimum

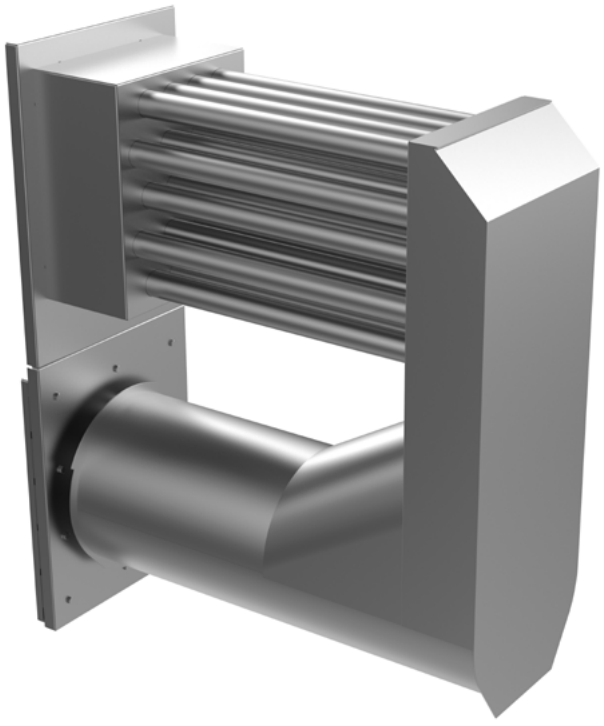
The minimised heat loss of RotoAvant FB is supported by the quality of materials and the multiple design features, including:

- Double silicone stainless steel seal around the perimeter of the door.
- Double-locking door system that minimises steam dispersion.
- Door thickness 110 mm.
- Compressed wool insulation at 120 kg per sqm.
- Low-emission mirrored glass, which reduces heat loss by 4%.
- Option for an optimised discharge management system.

TECHNOLOGY TO CREATE HIGH AMOUNTS OF HEAT

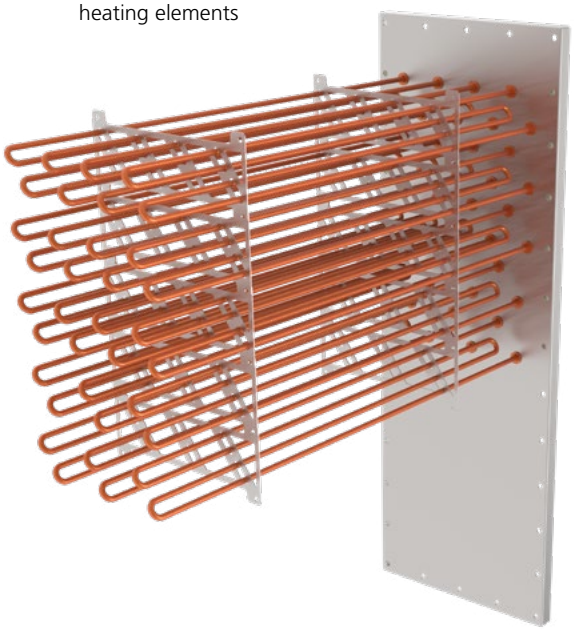
High efficiency combustion chamber (SC version)

The heart of the RotoAvant FB heat system is the combustion chamber in thick refractory stainless steel with a fume circuit shape designed to yield maximum efficiency. It works at lower temperatures compared to normal chambers, ensuring high efficiency and a long service life.
The large amount of heat that it generates and makes readily available allows the product to preserve its optimum cooking temperature at all times.



Large combustion chamber with a broad radiating surface.

Heat generator with armoured heating elements



Special armoured heating elements (SE version)

The electric oven versions (SE) of the RotoAvant FB line are equipped with special armoured heat elements in steel, with their thickness, shape and power specially designed to improve performance.
Their special surface treatment allows for improved heat radiation, which penetrates the product more effectively.

OPTIMAL HEAT FROM THE FIRST BAKING PHASE

The Polin heat accumulation system

The first baking phase is the most delicate because it affects the whole cooking process. This is why we have created a heat accumulation system that gets the oven immediately ready at the desired temperature, with a recovery speed that can reduce baking times, while also ensuring perfect results.

COMPARISON OF THE STANDARD SYSTEM AND THE POLIN HEAT ACCUMULATION SYSTEM

	STANDARD system	HEAT ACCUMULATION system
Loss of temperature when loading	50°C	20°C
Time to reach the optimum temperature again after loading	14 mins	7 mins
Baking time	26 mins	24 mins

A GENTLE AND EVEN AIR FLOW ON THE PRODUCT

An abundant air flow that envelopes the product

To ensure greater airflow capacity in the baking chamber, RotoAvant FB uses the **Wide Flow system**, channelling a great mass of generated air through specially-shaped ducts designed using the principles of flow dynamics.
This system allows for a perfect air volume/pressure ratio and a large enveloping flow, which ensures active and uniform baking over the whole surface of the pan.

1

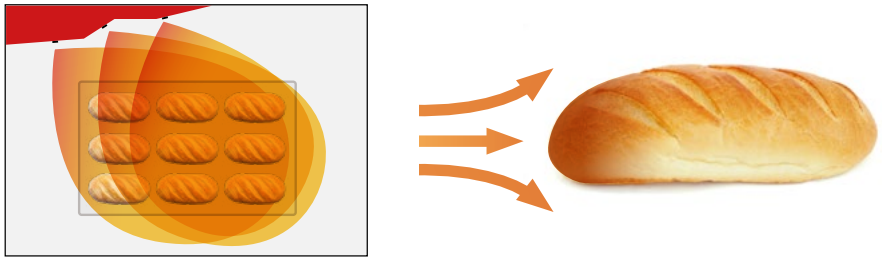


Figure 1 shows the air flow in a single duct rack oven.

2

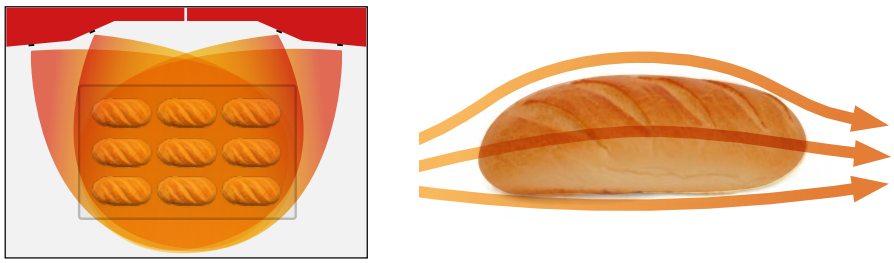
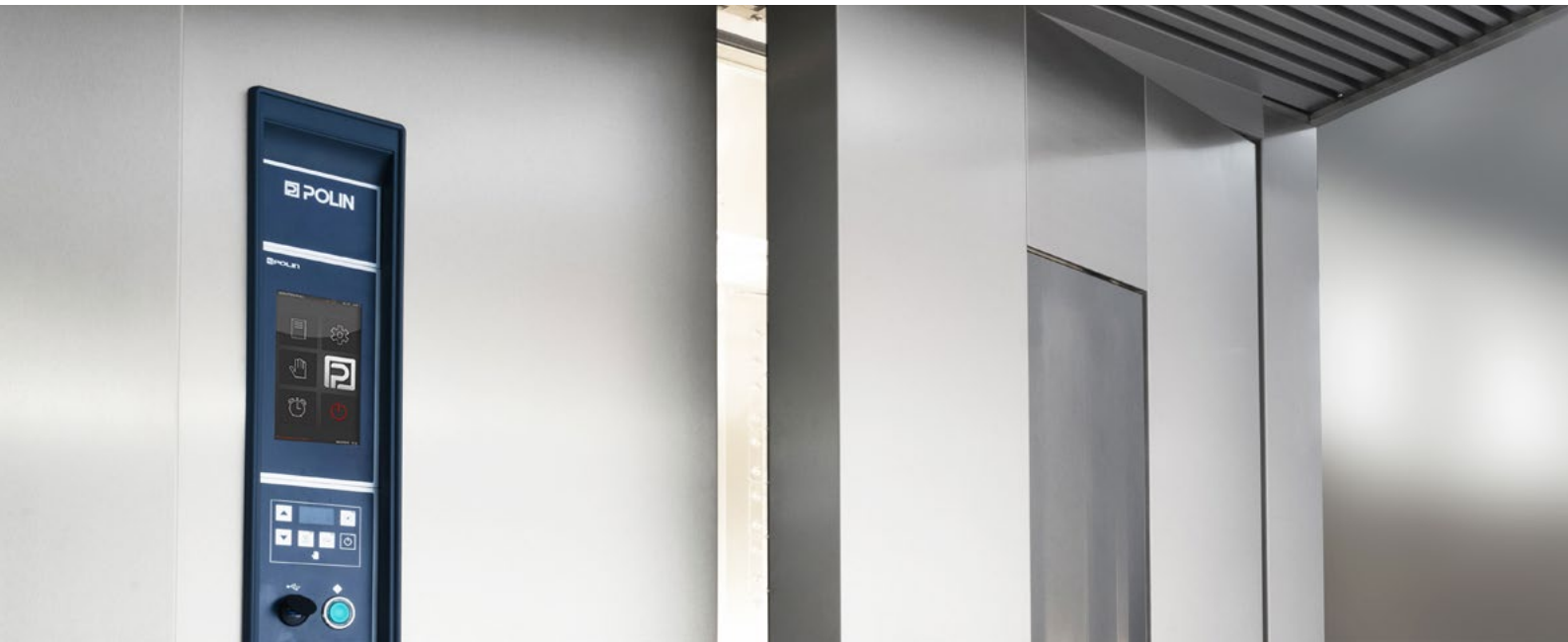
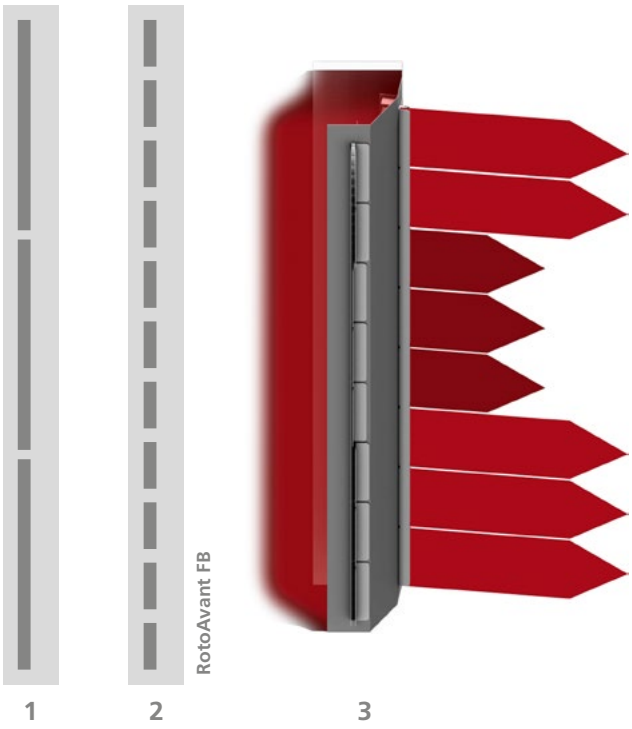


Figure 2 shows the airflow in a dual-duct Wide Flow system, which generates an air flow that envelopes the product.





Compared to a normal rack oven (figure 1), RotoAvant FB has a greater number of registers through which the air is directed (figure 2).
This allows a more precise adjustment of the air flow that envelopes the product, thereby improving the baking process (figure 3).

Perfectly uniform baking at every height level of the rack

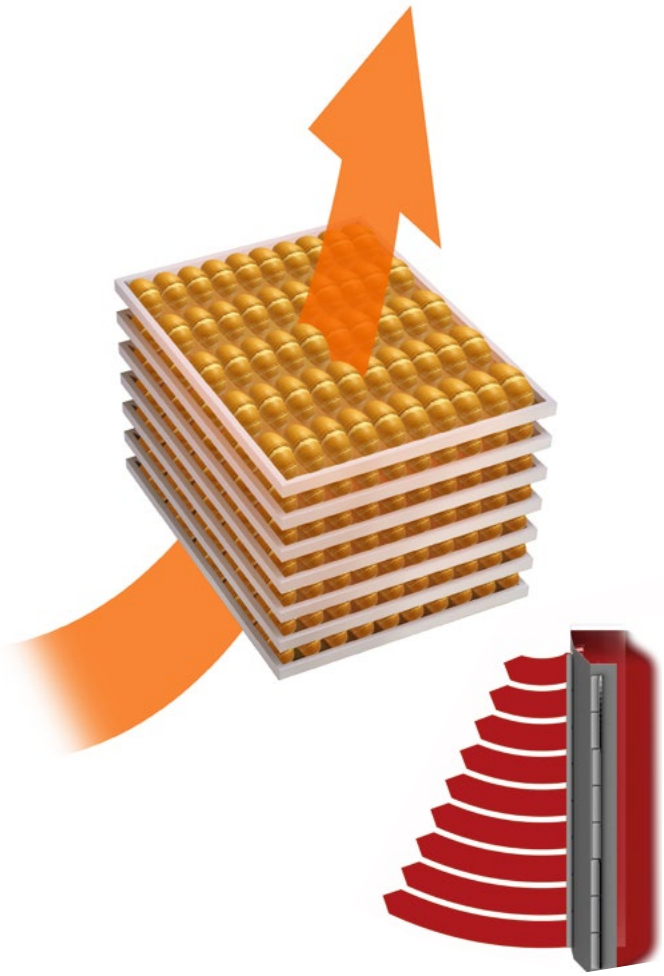
The vertical uniformity of the air flow is ensured by 30, 33 or 44-way **Vertical Air Direction**. This system made of special registers allows a very precise channelling of air towards the product, maximising the amount of heat enveloping the product surface and directing an optimal supply of heat to the centre and the entire perimeter of the tray and to every height level of the rack. The more registers there are, the better the targeting of the air flows; all Polin rack ovens, including RotoAvant FB, have a greater number of registers compared to normal rack ovens available on the market: 30 on the model 4676, 33 on the 6080 and 44 on the 80100.

Designed to recreate the ground effect

To recreate the ground effect on the bottom surface of the bread for perfect baking, more than 200 conveyors are arranged along the ducts to gently direct the air flow from the bottom upwards.

The right amount of air for the product

The use of inverter technology in RotoAvant FB allows you to select the exact amount of air required by the product at each phase, both in manual and automatic modes. There are 5 preset speeds that can be changed to suit your specific production requirements. This **Air Fine Control** system allows optimal baking for all product types, from large loaves to delicate pastry (standard on Flex Energy and HiControl versions).



The conveyors on the ducts guide the air flow upwards, creating the ground effect on the bottom surface of the product being baked.

THE BEST STEAM. UNIFORM AND IN THE RIGHT AMOUNT

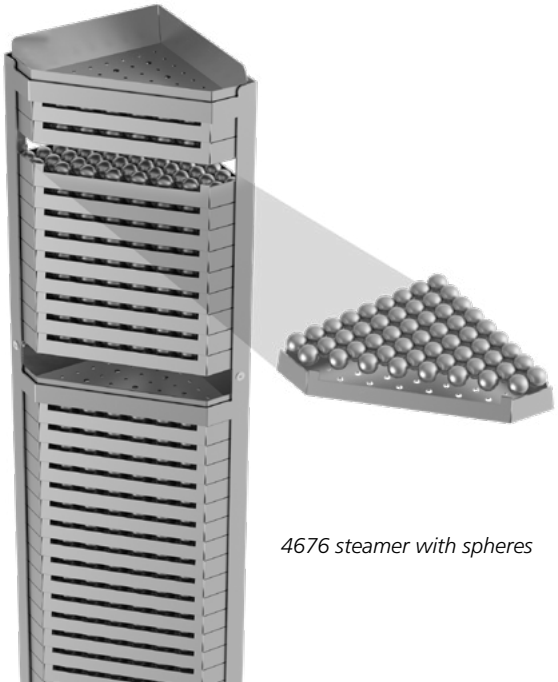
Quality steam on the product

To ensure optimal baking of the product, the RotoAvant FB steam generation system is designed to supply a constant, abundant and uniform flow of steam. The system consists of a large-mass steamer with spheres, linked to a modular vaporiser unit with cascading elements equipped with spheres.
The suction system that determines the amount of steam in the chamber, the positioning of the steam generator and the air flow inside the oven has been designed so that the product is enveloped with steam that readily clings to it.

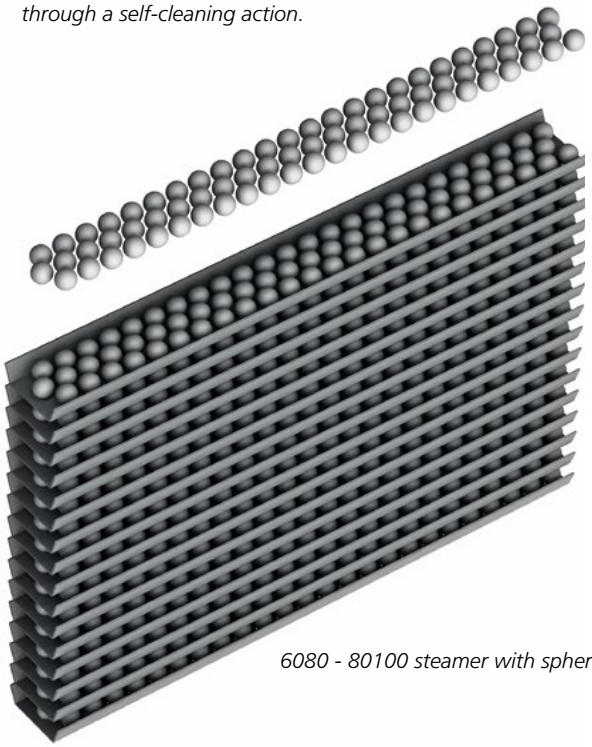
Automatic steam distribution

The automatic steam distribution system is controlled via the oven management software. Integrated with constant pressure in the chamber, it allows the moisture to remain on the surface of the product in the first, and most delicate, baking phase.

Steamer with spheres.
The spheres are self-cleaning and vibrate in contact with water, allowing to prevent the formation of limescale through a self-cleaning action.



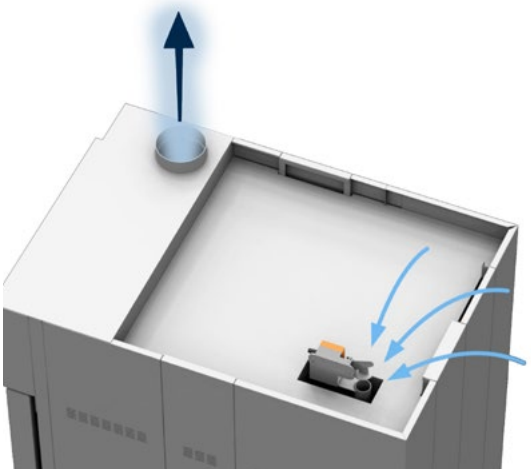
4676 steamer with spheres



6080 - 80100 steamer with spheres

Whenever you need a crustier product

RotoAvant FB is equipped with **Fast Air**, a feature that extracts steam rapidly in the final baking phase – ideal when you need crustier products.



A better product thanks to the constant pressure in the chamber

The innovative gravity valve system maintains a constant pressure in the chamber, making sure that the daily production is always consistent under all environmental conditions (standard on Flex Energy and Hi-Control versions).

Litre counter for measuring the water to be vaporised and stainless steel fittings

The litre counter measures the water intake for vaporising, based on the programmed amount and not on the time. This makes sure that the exact desired amount of water is vaporised, regardless of the water mains pressure (optional). The fittings are made of steel for maximum durability.

Large stainless steel extractor hood

The large extractor hood in stainless steel limits the dispersion of steam into the surrounding environment when the door is opened. It is 660 mm deep, with a capacity of up to 315 litres and an extraction rate of up to 700 m^3 per hour with double speed.

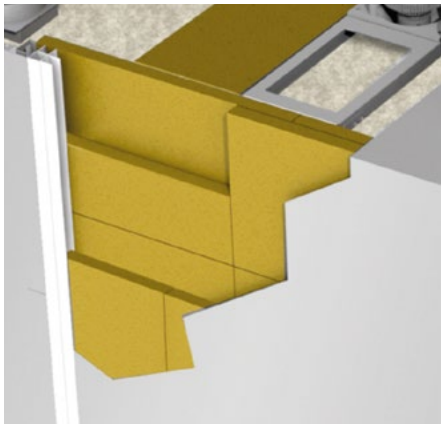
OTHER BUILD FEATURES

RotoAvant FB is an oven designed to provide excellent performance meeting the needs of bakers and pastry makers.
Thought out to the last detail, the build features of the series demonstrate high manufacturing quality and can be supplied with numerous extra optional accessories to further improve performance.

Hinged opening
The hinged opening of the double-glazed door facilitates cleaning.

Large die-cast hook
Large single-block die-cast hook. The larger section increases the contact surface with the bearings, thus reducing wear.

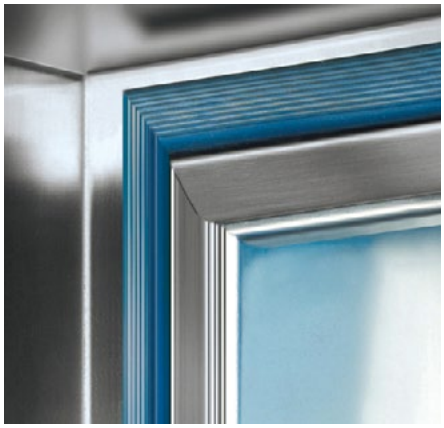
Smooth base
The smooth base makes cleaning inside the oven easier.



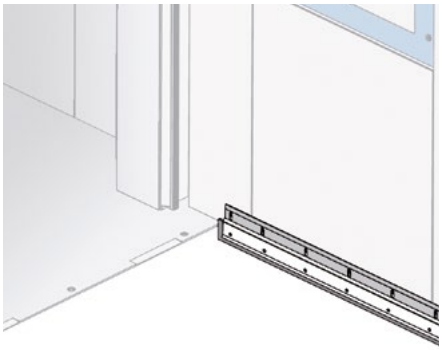
Pre-compressed panels
Heat loss has been reduced to a minimum thanks to the use of pre-compressed panels and compressed wool to 120 kg per sqm.

Chrome ergonomic handle
The shape of the handle has been designed for better grip and easier opening of the door.

Stainless steel coating
RotoAvant FB is made even tougher and more durable through special stainless steel panels.

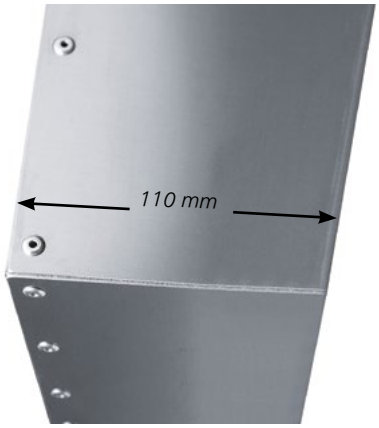


Double seal in silicone/stainless steel
Placed all around the door perimeter, it provides perfect sealing that lasts over time.



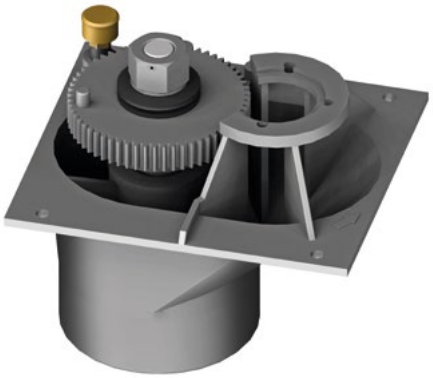
Adjustable bottom seal
The rubber seal on the bottom of the door can be adjusted in height.

Hood grid
Functional grid for uniform extraction over the whole width of the hood.



Door thickness

The notable thickness of the door ensures optimal heat insulation and robustness.



Single-cast rotation unit

The rotation unit structure is made of single-cast anticorodal aluminium.

Pressure relief outlet vent

Burner models are equipped with a pressure relief outlet vent.

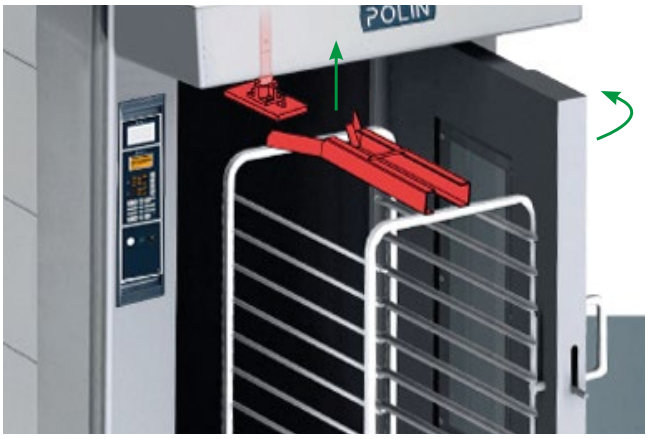
Double-locking door

Double-locking door helps to minimise steam dispersion.

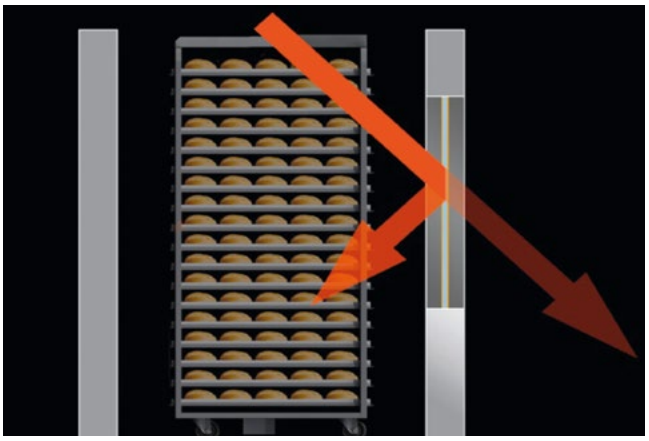
Door cooling

A special system allows the cooling of the outer side of the door thanks to an air flow through a special duct.

OPTIONAL



Rack lifting
RotoAvant FB is designed for semi-automatic lifting through levers, which is activated by door opening or closing (up to 250 kg). An automatic lifting and rotation unit is also available for racks up to 400 kg (optional).



Low-emission glass
The oven's thermal efficiency has been increased by the use of low-emission mirrored glass, which reduces heat loss by 4% (standard on Flex Energy versions).

Rotating platform
Greatly facilitates the handling of racks of different sizes and with different connection systems (optional).

Single-cast siphon
Made in single-cast anticorodal aluminium, it prevents steam emission during baking (standard on 6080 and 80100 versions).

SECURITY AND ALARMS

Time/temperature limiter
Prevents the input of recipes with incorrect parameters, which may cause malfunctions or unsafe situations.

Warning diagnostics
The system automatically identifies any problems that have not been highlighted by faults and communicates them to the operator through the display.

Alarms with fault display
An alarm signalling a fault is matched by indications of the cause on the display.

Automatic shutdown
If the oven is left switched on for too long without operating, the system will start to gradually lower the temperature until shutdown.

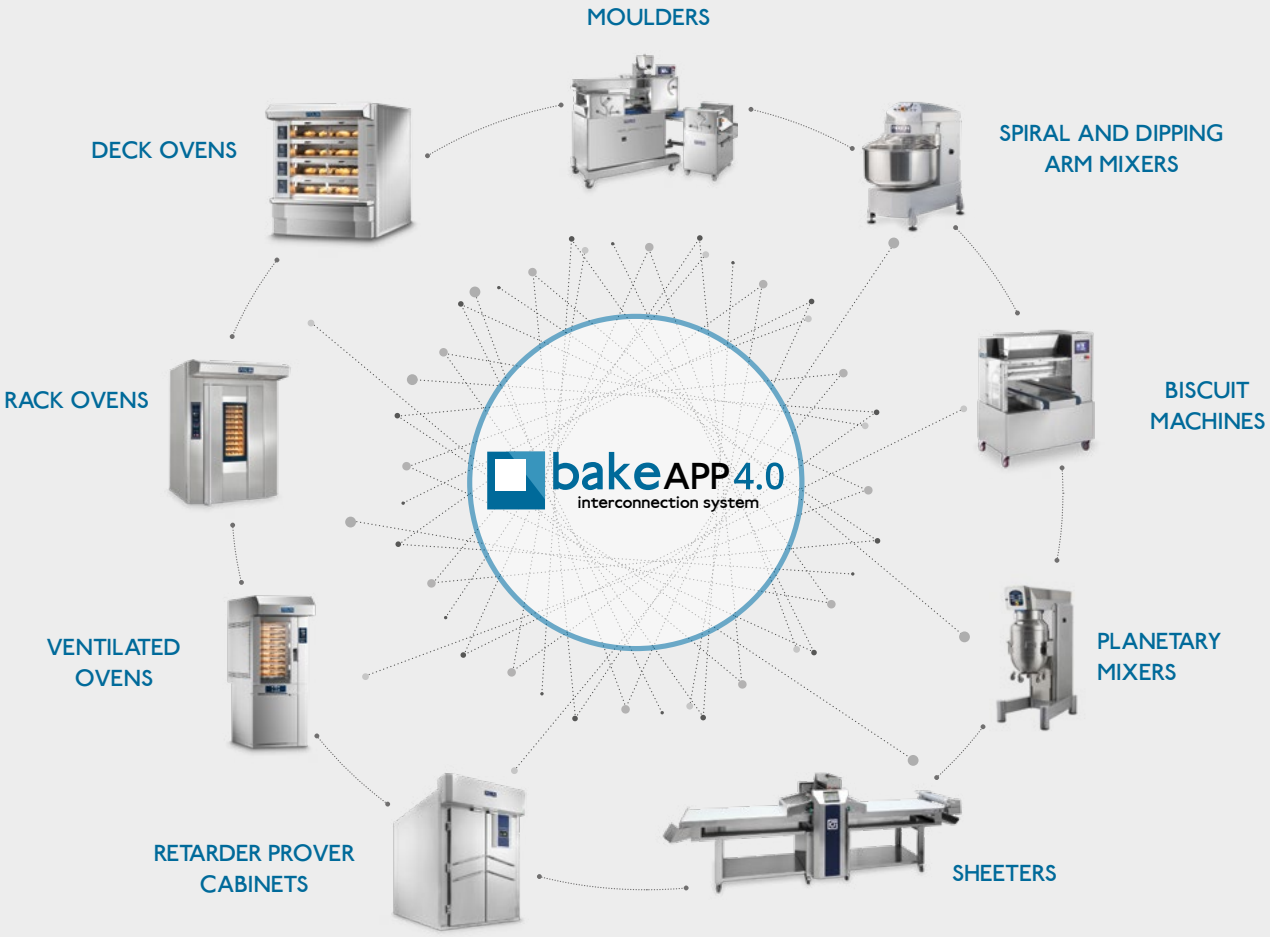
Door security system
Prevents the oven from functioning with the door open, even if the security system has failed.

BAKEAPP 4.0

INCREASE THE COMPETITIVENESS OF YOUR COMPANY.

Each oven of the RotoAvant FB line is designed to connect with BakeApp 4.0, the software created by Polin thanks to which you can create a 4.0 production system. In addition to communicating with the system, ovens and machines will be able to communicate with each other synchronizing the work and optimizing the production flow.
The result is a laboratory more efficient and ready to face the increasingly demanding challenges of a competitive market in rapid evolution.
In addition to this BakeApp 4.0 also allows you to control ovens and machines remotely allowing you to:

- **Create, edit and manage recipes;**
- **Control and manage consumptions;**
- **Check your laboratory's productivity and your sales;**
- **Monitor and prevent any anomalies.**



CHOOSE THE IDEAL VERSION FOR YOUR BAKING PRODUCTION

Our long-standing relationship with Art of Baking artisans from around the world gives us a deep understanding of all production details and allows us to design technical solutions to meet specific needs.
Smart, Energy Flex and HiControl are the three RotoAvant FB versions created to provide to all users the full benefits of an outstanding, high-performance oven.
Industry Pack is also available, providing a set of accessories and functions that are ideal for people who use multiple ovens in series and need to produce in large quantities.

SMART

RotoAvant FB is a gateway to excellent performance. This basic version allows you to manage storable recipes and oven controls, either through direct manual control or a simple but comprehensive software programme.
Smart offers high standards and exclusive functions that other rack ovens do not have, such as: a high-efficiency combustion chamber with low operating consumption, a high-capacity airflow in the baking chamber, an abundant and always ready flow of steam, thanks to the steamer with spheres.
Everything is controlled by the new 100-programme, 10-phase computer with 8-line LCD display, allowing you to easily and comprehensively manage all the features that can simplify production: oven automatic start-up, stand-by mode for energy savings, programming of each baking phase and recipe storage.

FLEX ENERGY

This is the version designed for users who need to be able to simply but precisely define production parameters for each type of product, from large loaves to delicate pastry.
RotoAvant FB Flex Energy offers all the high technological standards and exclusive functions of the Smart version, along with specifications that make it ideal to satisfy especially flexible production needs. With the inverter technology, for example, you can change the speed and the amount of air in the chamber, thus obtaining the highest baking quality for each type of product. The gravity valve maintains a constant pressure in the chamber under all environmental conditions.
This version has also been designed with the aim of ensuring continuity of production, by providing a second independent digital control panel.

HI CONTROL

HiControl is the RotoAvant FB version equipped with new computer controls and Polin Touch keyboard. Through this easy-to-use and comprehensive control panel, all oven functions can be instantly managed with a simple touch: automatic start-up, energy saving stand-by mode, programming of each baking phase and recipe storage. Polin Touch also allows to clearly and easily view and access to controls, alarms and diagnostics.

It facilitates the analysis of large amounts of production data, including oven efficiency controls and monitoring of baking phases.
RotoAvant FB HiControl is an oven that provides the high performance features and flexibility of the Flex Energy version, such as inverter technology, allowing to change the speed and the amount of air in the chamber, while also offering rapid extraction of steam and rapid cooling of the oven with the door closed.
HiControl is a complete oven all around.

POLIN
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INDUSTRY PACK

DO YOU HAVE MULTIPLE OVENS IN SERIES? NOW YOU CAN IMPROVE THEIR PERFORMANCE!

Industry Pack is a set of accessories and extra functions for different oven versions, designed to make RotoAvant FB performance ideal for users who work with multiple ovens in series and need to produce in large quantities. Industry Pack includes:

HOOD LED DISPLAY

Facilitates the operator's work when using multiple ovens in series.

LARGER STEAMER

The larger steamer ensures large quantities of steam even with continuous production.

STEAMER WATER LITRE COUNTER

Dose the right amount of water as programmed, regardless of mains pressure or the effect of any limescale obstructions.

REMOTE CONTROL

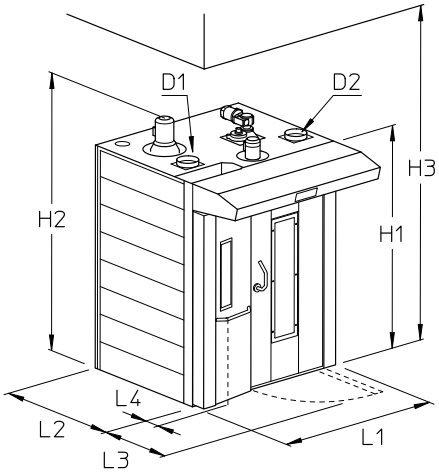
Configuration of BakeApp 4.0 remote control through a special electronic card for remote management via LAN or WLAN.

INDUSTRY PACK

	Smart	Flex Energy	Hi Control
BUILD FEATURES			
PRESSURE RELIEF OUTLET VENT	✔	✔	✔
SINGLE-CAST SIPHON (except for 4676 model)	✔	✔	✔
DOUBLE SILICONE /STAINLESS STEEL SEAL	✔	✔	✔
ADJUSTABLE BOTTOM SEAL	✔	✔	✔
DOOR SECURITY SYSTEM	✔	✔	✔
HEATING SYSTEM			
VERTICAL AIR DIRECTION	✔	✔	✔
AIR SPEED WITH INVERTER (AIR FINE CONTROL)	–	✔	✔
BURNER OR FRONT ARMOURED HEATING ELEMENTS	✔	✔	✔
RAPID COOLING SYSTEM	✔	✔	✔
STEAM SYSTEM			
STEAMER WITH SPHERES	✔	✔	✔
STEAMER WATER LITRE COUNTER	O	O	O
STEAM EXTRACTOR HOOD WITH GRID	✔	✔	✔
AUTOMATIC STEAM EXTRACTOR SYSTEM (FAST AIR)	✔	✔	✔
LARGER STEAMER WITH DOUBLE ENTRY	O	O	O
CONSTANT PRESSURE IN CHAMBER (WITH GRAVITY VALVE)	O	✔	✔

✔ STANDARD O OPTIONAL – NOT AVAILABLE

Oven type	L1 mm	L2 mm	L3 mm	L4 mm	H1 mm	H2 mm	H3 mm
4676	1460	1390	773	203	2200	2525	2750
6080	1836	1455	918	218	2300	2630	2840
80100	2250	1735	1128	187	2400	2740	2980



		4676 SC	4676 SE	6080 SC	6080 SE	80100 SC	80100 SE
Oven weight	kg	1300	1250	1500	1450	1950	1900
Tray capacity	no.	15/18	15/18	16/18	16/18	16/18	16/18
Tray pitch	mm	105/87	105/87	105/93	105/93	105/93	105/93
Tray dimensions	mm	460x760	460x760	600x800 No. 2 600x400	600x800 No. 2 600x400	800x1000	800x1000
Minimum door width	mm	780x2260	780x2260	500	500	580*	580*
Electric voltage	kW	400/3N~/50	400/3N~/50	400/3N~/50	400/3N~/50	400/3N~/50	400/3N~/50
Thermal power	kW kcal/h	2.1 ~44.740 (52,0. kW)	40.8 (50.5 kW power)	2.3 ~60.000 (69,8 kW)	50.8 (60.5 kW power)	3 ~80,000 (93 kW)	65.8 -

SE electric **SC** combustion (fuel type: LGP, methane, diesel)

(*) 1020x2470 when shipped in blocks

Since 1929 leader in the world of “Arte Bianca”

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