

Unique product

ANTON MAREIS HAS INTRODUCED A NEW PRODUCT INTO THE RANGE, A BREAD BAKED IN A WOOD-FIRED OVEN TO MARK 100 YEARS OF THE COMPANY'S EXISTENCE. FOR MAREIS' BIGGEST PRODUCT LAUNCH, THE MASTER BAKER HAS INVESTED IN A NEW WOOD-FIRED OVEN FROM THE FRITSCH OVEN SOLUTIONS GMBH



++ figure 1
The glowing wood pellets enter the baking compartment

+ For Master Baker Anton Mareis, Executive Director of the Bäckerei Mareis GmbH, Vilsbiburg, Germany, the topics of regionalism, high baked goods quality and a good working atmosphere are the keys to success. So he takes care to ensure that the raw materials come from the surrounding area and the trainees receive a 100% guarantee of a job. To recruit young people to be trained in the business, for example, trainees have their driving licence paid for and the bakery offers excellent specialist training. This is shown by the fact that many of the apprentices complete their training as the best in class. Mareis also invests continuously in the business, which has a total of 130 employees and 11 sales outlets of its own. In 2012 a sum of around EUR 1m flowed into expanding production and into new technology. The latter includes a new thermo-oil wagon oven from the Karl Heuft GmbH, Bell, a rack washing plant from Guggenberger Reinigungstechnik e.K., Wain, a new

FlammAroma

The FlammAroma wood-fired oven 3.18.20 has three hearths and is 1.8 m wide and 2 m deep. This provides a total baking area of approx. 10 m². The individual baking compartments are supplied with pellets by two burners each. According to Fritsch, the oven consumes approx. 75 kg of pellets to heat all three baking compartments, for example from 200 °C to 280 °C. The oven, which weighs around 11.5 t, has a heating power of 180 kW. +++

goods distribution system from the ToolBox Software GmbH, Eschweiler, all from Germany and the new wood-fired oven from the Fritsch Oven Solutions GmbH, which belongs to the Fritsch Group.

The group presented the FlammAroma wood-fired baking oven for the first time at the iba 2012. From the trade fair, the oven went directly into the Mareis Bakery's new building extension. The Executive Director had already started working on the subject of wood-fired oven bread in 2011, always with the thought at the back of his mind that he wanted to offer his customers something special to mark 100 years of the bakery's existence in 2013. The master baker looked at various concepts, arranged for colleagues to explain to him the advantages and disadvantages, and sent his staff to training sessions. According to the Executive Director, "My first decision was that I must choose a pellet solution. Firing with logs of wood and the associated efforts, e.g. storing the wood, or the pollution caused by the smoke was something I did not want either my employees or my neighbours to have to put up with."

After extensive tests, Anton Mareis finally decided in favour of the newly developed FlammAroma wood-fired baking oven which Fritsch has built itself and marketed since 2012. The oven is supplied from a 10 t outdoor silo with pellets which leave the silo via a screw conveyor. The pieces of pressed wood then enter the conveyor pipe under reduced pressure. From there they move forward into a cyclone filter which separates the dust and the pellets. The dust passes into a dust bag, thus preventing clogging of the conveyor



++ figure 2

pipes and contamination of the sensors, for example. The dust-free pellets move from the cyclone filter into the pellet distribution system, which is separated from the cyclone by a slide valve. This is necessary for fire safety reasons. It would prevent the fire from penetrating into the pellet silo in the event of an uncontrolled fire in the oven or in the burner.

Automatic firing

The three-deck oven has six metering screws and six conveyor screws. Transport and metering of the pellets is controlled automatically by ▶



++ figure 3



++ figure 4

Two employees make up the loaves by hand. To launch the product the bakery invested not only in a new oven but also in new proofing baskets made of pressed spruce. These have a special shape so the bread can also be sliced in the branch

The pellet distribution system automatically supplies the required amount to the burner

Executive Director and Master Baker Anton Mareis

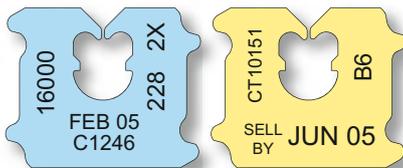
ADVERTISEMENT



Kwik Lok®... INNOVATIONS IN BAG CLOSING!

Kwik Lok developed the plastic bag closure over 50 years ago. This small idea is now in use around the world; manufactured in six world-wide plants. Kwik Lok is dedicated to bag closing innovations; turning earned capital into new product development. Kwik Lok and our customers are partners in progress; a relationship beneficial to both.

Automatic and semiautomatic systems available.



BAG CLOSURES

BAG CLOSING EQUIPMENT



EASY TO READ CODING

Kwik Lok will close and print coding (optional) on your package with one system.

GIVE US A CALL TODAY!
Telephone: +31 70 302 1010

KL Kwik Lok® EUROPE
PO Box 17111
2502 CC Den Haag
The Netherlands
www.kwiklok.com

++ figure 5

The new wood-fired oven bread is well received by customers. Altogether eleven sales outlets generate around 95 % of sales. The remaining 5 % is earned through other customers such as canteens and hospitals



© fzm

the oven's program. The plant meters the pellets to the ceramic glow igniters until the set-point temperature (measured in the stone of the baking chamber) is reached. The igniters heat the air. This is then carried into the combustion chamber and as a result of which it flows over the pellets. The latter start to glow and a photo-sensor monitors the flames. This allows the controller to recognize when the oven must change from "glow ignition mode" to "metering mode". A blower then transports the lighter, glowing pellets into the baking chamber, where they burn completely. New pellets are fed into the burner at the same time, until the required temperature is reached in the baking compartment.

Heating up the oven can be divided into three phases. The first step is the pre-heating phase to bring the energy into the oven. After the required temperature has been reached, it is followed by the burn-out phase. This lasts approx. 20 min, during which the remaining pellets are completely burnt. This can be followed by an optional equalization phase during which the temperature becomes uniformly distributed in the baking chamber in approx. 15–20 min. According to Master Baker Ralf Künzer, Process Manager at Fritsch, "The user can also omit the equalization phase. If desired, this produces rather less uniform loaves which are either slightly paler or slightly darker."

For example, this step is omitted at the Mareis bakery, because the master baker rather prefers a livelier browning of the loaves. Mareis explains that, "It emphasizes the artisan character of the bread."

In practice

One advantage of the FlammAroma is the automatic controller, but of course there are differences when using a wood-fired oven compared to another oven type. For example, the baking chamber must be cleaned by hand with a suction device before each load, to free it from ash residues, although automatic solutions are also offered. Ash residues also remain in the oven's burner, and the staff must remove these once a day with a suction device and a special attachment. Fritsch also recommends servicing the plant every six months. If malfunctions occur, the plant constructor can help the bakery immediately via remote maintenance.

When producing baked goods, the oven determines the work procedures, and the employees must adjust to the new oven. Batch-after-batch baking is impossible due to the prolonged heating up phases, so the dough preparation must adapt to these circumstances.

The Mareis bakery has broken into a niche market by investing in the new oven. For this, the region's market leader launched the "Original Mareis Wood Oven Bread" at the start of 2013. The mixed rye bread (65/35; 1.5 kg) with a dough yield of 180 rests in the bowl for 70 min after kneading. After proofing, the staff makes up the bread carefully by hand. Next the dough pieces for the loaves rest for a further 30 min before going into the oven. They are baked for 90 min at an initial 300 °C, decreasing to 220 °C. The oven is loaded and unloaded by peels, for which automation is possible. The staff can peel 30 loaves per hearth, and initially the plan is for around 270 loaves per day to leave the production unit. However the bakery has already sensed increased customer demand at the market launch.

The bread is sold for EUR 6.90 (EUR 4.60 per kg), and thus around 30 % above the price of a comparable bread not baked in a wood-fired oven. According to master baker Anton Mareis, "Bread is our competence, and the greater effort and artisan skill needed for wood oven bread is exactly what customers are happy to pay for." There were no problems when installing the oven and the location of the bakery in a residential area was not a problem either, because the oven's exhaust gas standards required by the authorities are complied with even without using a flue gas filter.

Following the successful launch of the new bread, the Executive Director is now thinking about expanding the wood-fired oven product range. For example, the inclusion of buttercake (sweet German yeast bread) in the product range is being considered. The master baker has further plans, and wants further organic growth for his business enterprise. A building extension with an experimental and visitors' bakery is also planned. For example, apprentices are to undergo further training there, and visitors are also to be brought closer to the artisan craft of baking, to show how unique products emerge from the production unit in Vilsbiburg. +++