

Report on Bäckerei-Konditorei Ohl

Bruchköbel, Germany. MIWE is already well represented at Bäckerei-Konditorei Ohl. „We're extremely happy with their baking ovens and bakery refrigeration systems“, says master baker Jürgen Ohl. And that's why he and his brother Bernd were among the first to choose the new MIWE roll-in e+. The two brothers are impressed with the baking results and energy efficiency of the new system.

The bakery's production facility is located at its high street headquarters in Bruchköbel near Frankfurt. Space there is limited, especially considering that the company supplies 10 outlets and a delivery service, but processes are carefully thought-out and well structured. The 30 production employees at the facility are equipped with cutting-edge baking technology. They use a MIWE Ideal and a MIWE electro oven, both featuring 15 square meters of baking space, three rack ovens made in 1992, 1994, 1996 as well as the new oven from 2009.

„We wanted to lighten the load on our oldest oven, a 1983 MIWE electro“, Jürgen Ohl recalls. He said the oven was still in use but it was starting to show signs of age and it could no longer compete with modern ovens in terms of energy

efficiency. „That certainly proved to be true“, says Jürgen Ohl, who can now confirm that the new MIWE roll-in e+ lives up to its promises, especially when it comes to energy consumption.

Together with the experts at MIWE, different measurements were taken. Jürgen Ohl: „The results show a 20 to 25% reduction in energy consumption“. This is easy for him to observe since two of the old rack ovens are still in use alongside the new MIWE roll-in e+.

These real-life measurements are backed up by data from the Arnstein-based oven manufacturer. Compared to previous models, the MIWE roll-in e+ has a lower connected load of 70 kW instead of 85 kW. At the same time, the exhaust gas temperature is 50° Celsius lower than that of comparable rack ovens.

Another outstanding feature is that lower baking temperatures can be used and that the oven heats up faster. „This means we can bake more in the same amount of space because the oven returns to the set temperature more quickly“, says Jürgen Ohl, expanding on the practical advantages of the oven. →



Views of the new MIWE roll-in oven.



Jürgen Ohl with the new MIWE roll-in.

On the surface, these astonishing new features are hardly noticeable. The MIWE roll-in e+ is approximately the same size as its predecessors. „This is important when integrating a new oven into existing series of ovens“, says master baker Ohl. The new roll-in e+ is actually 10 cm deeper. But this is not a problem at Ohl’s bakery because there is enough space at the rear to accommodate the new depth.

The roll-in e+ is deeper because its steam device has been relocated. It is now in the baking chamber at the rear, separate from the air duct of the rack oven. Here, the oven’s high thermal mass ensures that sufficient steam is always available.

„Especially for batch-after-batch baking, steam always has to be quickly available“, says Jürgen Ohl, explaining the requirements. With the roll-in e+, steam is always quickly replenished. Just as importantly, an oven must quickly heat back up to the starting temperature. „The new oven also does this more quickly than older models“. This is a result of the oven’s outstanding heating power, not to mention the superior insulation of the oven which loses hardly any energy through emissions.

For Jürgen Ohl, steam performance is one of the highlights of the roll-in e+. „We are using half a litre less steam, but are getting a much better effect on the product“. At Ohl, these improvements can be seen in products such as Kaiser rolls, which have a more prominent bloom and improved shine.



View of oven with MIWE proofing chamber and MIWE ideal.

Although Bernd and Jürgen Ohl are intent on saving energy and money, baking results always have the highest priority. „And the results are just right“, says master pastry chef Bernd Ohl, who is in charge of sales and distribution at the company. His family business has always enjoyed a strong position in the pastry market where once again the company’s quality and selection sets it apart from the competition.

The MIWE roll-in e+ is especially suitable for pastry baking. Jürgen Ohl: „Our sponge dough bases for roulades are much juicier and can be rolled much better“. This is possible thanks to the MIWE aircontrol system which controls air circulation. For roulades the aircontrol is set to a very low setting“.

A dosing slide valve between the heat exchanger and the baking chamber has nine settings. In this way, even sensitive products that are normally baked in a deck oven can be baked in a rack oven. Jürgen Ohl: „We’re now baking pastries with egg wash and pretzel pastries in the new rack oven“. This was never possible before, he says, explaining that air circulation was previously too strong and literally blew off the egg wash. „Now we can reap the benefits of continuous loading for these types of baked products too“, says Jürgen Ohl with pleasure.

By contrast, a higher level of air circulation is used for hard rolls. In this case, MIWE aircontrol runs at setting 9. This is necessary in order to produce a distinctive bloom in hard rolls. This also applies to the „Bagohlett“, a French bread

loaf with Ohl hidden in its name. „We want the bloom to be rustic and prominent for this bread too“, Jürgen Ohl explains. MIWE aircontrol also runs at a higher setting for these products. Tin bread is baked with aircontrol at a lower setting. „This way we can prevent the bread from drying out during baking and obtain a juicier crumb“.

„Thanks to improved air conduction in the baking chamber, we can bake at lower temperatures“, Jürgen Ohl says. He has also discovered that being able to control the air circulation speeds up crust formation in baked goods. „When it comes to pastries, it means they stay fresh longer“.

Half-baked products are now baked exclusively in the MIWE roll-in e+. „The results are so much better than with other ovens that we can no longer afford to use them. Our customers would notice the difference“, admits Jürgen Ohl, happy with amazement. He goes on to explain that his products are more robust and don't show wrinkles from shrinkage. This is possible because lower temperatures and, more importantly, less air circulation is used for half-baked products. In this case, MIWE aircontrol runs at setting 5. Five different products are half-baked in the production facility before being baked to completion at the branch outlets.

Jürgen Ohl admits that he „sometimes experiments“ and tries out different things. „It's something you have to do because there are so many possibilities“. For example, with fully proofed rolls, more circulating air is used during the initial stage of baking. MIWE aircontrol is set at a higher setting for these rolls.

Baking programmes and their parameters can be entered and modified using the MIWE TC control system. TC stands for Touch-Control, a control unit that features a touch-sensitive screen. At Bäckerei-Konditorei Ohl, the baking programmes for the roll-in e+ are maintained on a PC and transferred to the oven control system via a USB connection. The data can also be entered directly in the TC control system. Jürgen Ohl: „The system is relatively simple and straightforward to use.“ The oven staff were able to operate the control system after a short training session. Between 7 and 10 am, when the bakers are finished, the pastry staff also bake their products using almost nothing but the roll-in e+.

Up to eight baking steps can be defined for each baking programme. For each of these steps, users can set the baking temperature at the beginning and end of the segment, the steam quantity, the draught and aircontrol. Two temperature sensors in the baking chamber ensure precise monitoring of the desired temperature. Only managers and oven staff have access to these parameters. Jürgen Ohl. „Everyone else is unable to make changes, thanks to password protection“.

Another advantage of the MIWE roll-in e+ is its indicator light. „It's a really practical feature“, say the owners with visible pleasure. Especially when multiple ovens are running, the light makes it easy to see which one needs attention. The signaling bell can come from any of the ovens; older rack ovens have also already been upgraded with this feature. →



Pastry cook using the TC control system.



Pastry shop employee making Danish-style pastry pretzels.

The indicator light is located above the TC control system in a column to the left of the oven. In accordance with industry hygiene requirements, the control system is flush with the surface of the oven for easy cleaning. Because it is integrated into the column, the control system is also better protected from heat and steam from the baking chamber. A temperature sensor automatically indicates excessively high temperatures on the control system display and starts a fan.

However, the TC control system is not threatened by heat and steam from the door. „The door is amazing“, says Jürgen Ohl, smiling with satisfaction. „It’s absolutely steam-tight but is still easy to open and close“. This is due to seals that are integrated into the door instead of the door leaf. These rubber seals are easily adjustable and ensure that the door remains air-tight.

The door is just as well insulated as the entire rack oven. This minimises heat emissions, which saves energy and prevents the temperature in the bakery from increasing unnecessarily. At the same time, a large inspection window in the door ensures a perfect view of the baking chamber. „This is another new feature of the roll-in e+ that makes our daily baking routine much easier,“ say Jürgen und Bernd Ohl, excited about their new rack oven.



View of burner and electrical components above the oven.

In the words of Jürgen Ohl:

„What I like most about the new MIWE roll-in e+ is the fact that there are so many ways of controlling the baking results. This means we can fine-tune the baking parameters to the product. Improved air conduction means we can bake at lower temperatures. That alone saves energy. At the same time, we use more air circulation. When the hot air is properly controlled, as it is with the roll-in e+, our baked goods never dry out.“

A brief portrait of the Bäckerei-Konditorei Ohl

Owner: Jürgen + Bernd Ohl
Hauptstraße 66
63486 Bruchköbel, Germany

Branch outlets: 10, 20 percent deliveries

Employees

Production:	20
Sales:	50
Distribution/logistics:	10
Management:	3

Price examples:

Hard rolls	0,30 EUR
Rye bread, 1,000 g	2,80 EUR
Special bread, 500 g	1,95 EUR
Danish-style pastry	1,05 - 1,40 EUR
König-Ludwig bread, 1,000 g	2,90 EUR