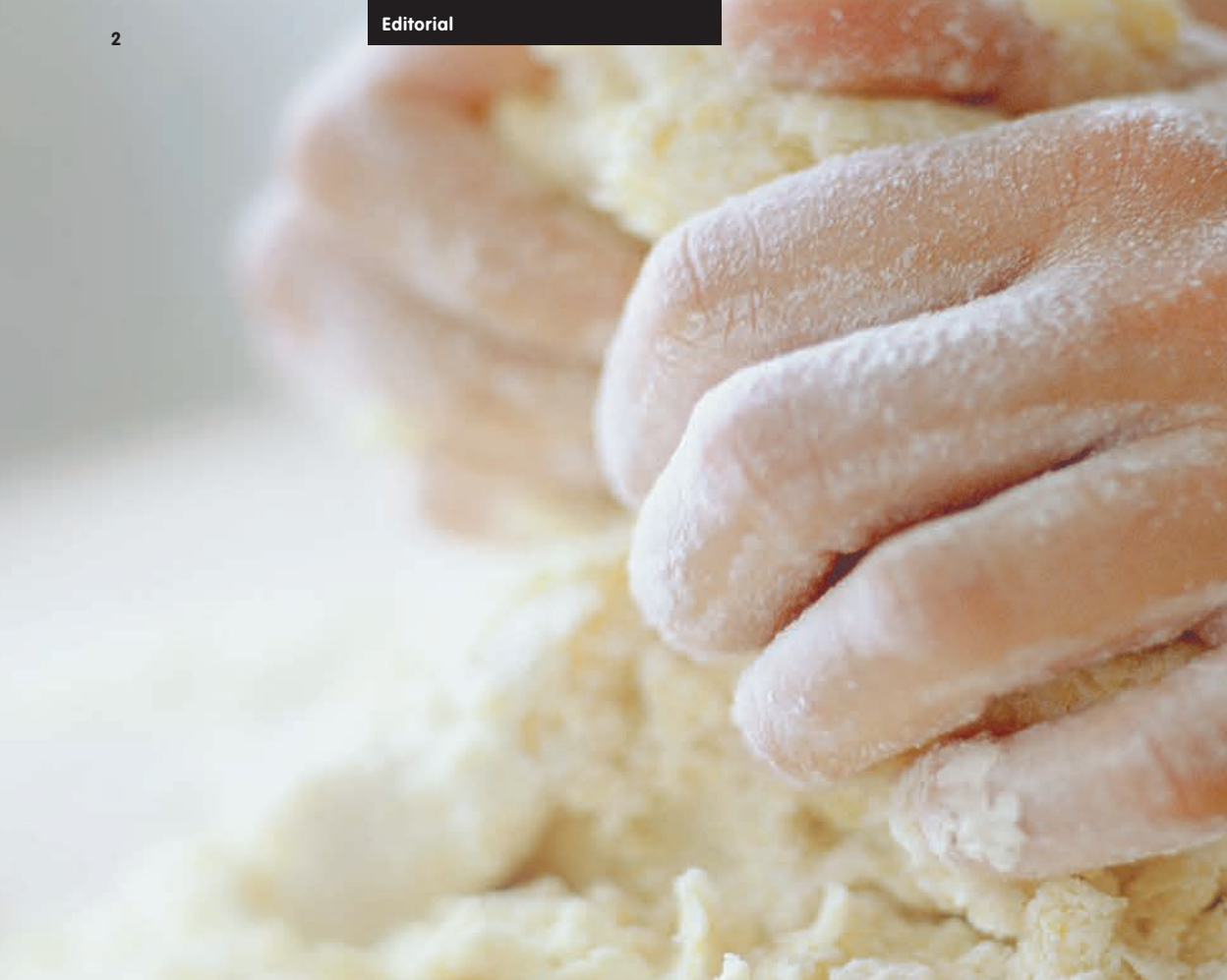




MIWE impulse

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There is a good reason why we see ourselves as technological leaders in the baking industry and why we constantly strive to further develop this strategic position. It's (new) technologies that pave the way towards a successful future for our customers. Even in baking, a cultural technology of humanity which has been practised for thousands of years, there are still advances in technology – at MIWE, in any case.

With the new MIWE atmo-jet steam technology or the MIWE variobake with its flexibly controllable baking characteristics, we have recently introduced two ground-breaking new developments which assist bakers in achieving improved baking

results and with it, better businesses. We have one other thing for iba 2015. With the totally revised MIWE roll-in e+ we present a new technology which has been celebrated as simply "sensational" and a "revolution" by its first users: atmospheric baking. No more weather and draft-related quality fluctuations in the bakehouse (which also saves energy – not that this will surprise you, as MIWE is known for being a pioneer and market leader in regard to energy-efficient bakehouses).

Changes in eating habits offer bakers new opportunities – "snacks" is the word on everyone's lips. So that you can participate in this business, MIWE is producing several baking oven systems with a wider range



of functions which fit perfectly into your store worlds and significantly broaden your technological opportunities from traditional baking and steaming through to gratinating.

A further impulse comes from a completely different key technology. The world (and also that of objects) is converging – networked bakehouses and networked stores are no longer dreams of the future. And as always, MIWE users are there from the very start. MIWE connectivity is the motto used to summarise all our networking and connection activities, including the integration of bakery processing plants to our Remote Service Network, central analysis tools such as MIWE win-CAB, or the MIWE apps for baking

stations which we are introducing at iba (and in this issue). Also take a look at the new MIWE go! control, since time is moving on, even in control technology.

And in demonstrations too. If you visit us at iba 2015, we will gladly give you a tour through a virtual bakehouse. In 3D, obviously. So you see: We're not short of ideas on how to make baking easier for you.

Welcome to the future of baking!

Sabine Michaela Wenz

"Sensational. A revolution."



Allow us to introduce the new MIWE roll-in e+ and 'Atmospheric baking'.

Bakers tend not to be exuberant. So if one of them calls a MIWE innovation “revolutionary” and “sensational” without prompting, there must be a good reason. Allow us to introduce the MIWE roll-in e+ and ‘Atmospheric baking’.

The man really knows his way around the MIWE roll-in e+. As a master baker and manager of a large Swiss bakery, he is in charge of a production area 6400 square metres in size and 15 MIWE roll-in ovens.

In total, his range includes 1,200 different products, of which 600 are produced daily, most of them fresh (only roughly one fifth leaves the company frozen). To accomplish this, the ovens run around the clock 7 days a week, interrupted only for short cleaning periods. So he’s a real power user, who produces reliable premium Swiss quality on demand for his roughly 500 delivery customers.

To ensure that everything works smoothly, not only must all workflows be balanced delicately and flexibly, the manager must be able to depend on every one of his ovens to bake reliably and consistently in the long term.

And he was used to that performance from the MIWE roll-in e+ ovens in the former bakehouse: “They delivered perfect baking performance.” Then the company moved to a new production facility near Zurich airport. And everything changed.

“As bakers, we tend to blame problems on flour or the oven. But we were certain that neither one nor the other was the reason in this case,” reports the master baker. The ovens and raw materials were the same as before. So it had to be the changed conditions.” And they soon ‘drafted’

a plan to remedy the problem: The location of the exhaust flues and extremely difficult pressure conditions in the bakehouse were causing the problems – both are phenomena which occur not only here, but in many bakehouses, and can make continuous, consistent baking far more difficult, as the ambient air pressure, which fluctuates based on the weather conditions, can wreak havoc on the oven draught.

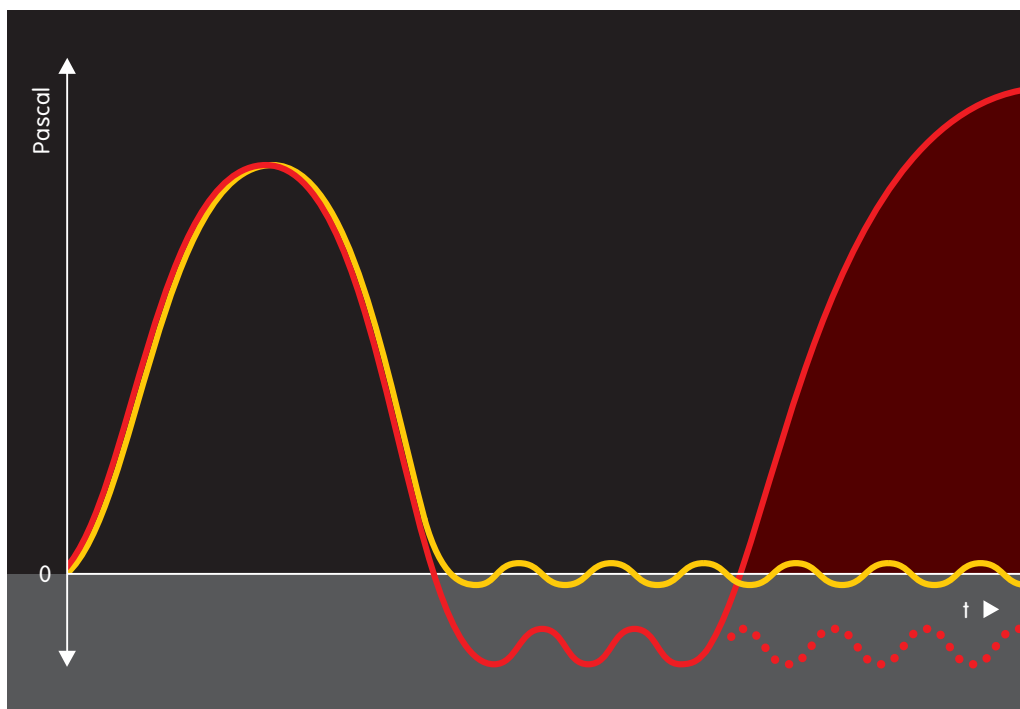
Even MIWE’s engineers can’t influence the migrations of high and low-pressure fronts. What they can do, and do well, is make baking simpler and more successful by decoupling the pressure conditions in the baking chamber from ambient conditions. The result of their work – and the reason for the exuberant praise quoted above – is ‘Atmospheric baking’, which MIWE will officially introduced for the first time at iba 2015 (initially in the new MIWE roll-in e+ for the 60 x 80 tray size), after it has proven itself fully in a number of test installations.

‘Atmospheric baking’ means baking at atmospheric (standard) pressure in the baking chamber. When the overpressure in the baking chamber caused by the steam jet drops back to ambient pressure, the controller intervenes and keeps the pressure in the baking chamber constant at 0 Pa(scal) relative to the ambient pressure until the end of the baking process. This is achieved by a pressure measurement and control device combined with intelligent control software.

Normally, the baking chamber pressure decreases to approx. 5 to 10 Pa below ambient pressure after the steam jet, and rises again to a significant overpressure when the

These are the new features what is the probably most economic rack oven in the world has to offer:

- 1 ‘Atmospheric baking’ incl.: An end has been finally put to “uncontrolled baking” and dependence on the weather. Perfect control instead. And even more energy saved
- 2 Large 10.4" glass display with Touch Control
- 3 Status light with considerably enlarged illuminated display and brighter LED light
- 4 Steam hood with integrated LED remote display (optional)
- 5 Hygiene-friendly, flush inner door surfaces
- 6 World’s first: the first core temperature sensor in a rack oven (optional)
- 7 50 % more interior lighting
- 8 Triple glazing with energy-saving insulating pane
- 9 Splash proof according to IPx4; meets the IFS and HACCP hygiene management requirements on the inside and outside
- 10 Rotating plate with complete, easy-to-clean edge cover
- 11 Easy to remove, slip-proof heavy-duty ramp
- 12 The heat-storage wall conserves energy in the baking chamber
- 13 Motor-driven soft close door lock (optional)



After the first supply of steam, the pressure drops into the "uncontrolled area" (grey zone), depending on the environment.

It stays there until the end of baking (dotted in red) or shoots up again (red line) after the slide valves are completely opened.

Energy loss (dark-red zone) is the consequence.

However with 'Atmospheric baking' the pressure – completely independent of the ambient conditions – moves within the controlled and energetic optimum range of ± 2 Pa (yellow line).

slide valve is opened 100% due to the cold air intake.

However, the swings in one direction and the other depend on many external factors (ambient air pressure in the bakehouse and outdoors, outdoor temperature, humidity, wind conditions) and therefore differ significantly depending on the weather conditions; this makes consistent baking virtually impossible, especially if the draught conditions are unstable.

'Atmospheric baking' puts an end to these adverse influences due to weather and draughts.

As a result, the pressure conditions in the baking chamber, which are so important for consistent baking results, are always the same whether the conditions are stormy, rainy or snowy outside, whether the sun is beating down on the roof or the exhaust flues are enveloped in autumn fog.

Fan settings don't change this pressure setpoint either.

Local pressure differences within the chamber (remember the infamous steam pockets), as well as differences between the different baking processes on different days are eliminated once and for all.

And that was the case for our Swiss master baker too. 'Atmospheric baking' solved the consistency problems caused by the draught. So it's no wonder he gets carried away: "It's revolutionary – simply sensational!"

By the way, the 'Atmospheric baking' function will be included as standard from model version 3.0, at no extra charge in every new MIWE roll-in e+.

The technology can also be retrofitted to more recent MIWE roll-in e+ with the MIWE TC control system from roughly model year 2013 (model version 2.5).



In principle, baking programs can be used unchanged for 'Atmospheric baking'. However, it makes sense to adapt them to the new technology, to make the most of the many beneficial side-effects.

For example, practical experience has shown that many products rise far better in ovens due to 'Atmospheric baking', and in some cases baking programs can be shorter. As 'Atmospheric baking' also eliminates the need for the usual fresh air supply, which wastes valuable energy unnecessarily and without control, the new technology makes what was already probably the most economical rack oven in the world a great deal more economical.

As usual, our master bakers and baking technology experts will be happy to help you with all their experience when you make the switch to the technology of the future.

■ *But it doesn't stop there.*

As though one 'revolution' were not enough to impress customers on its own, the MIWE developers included a range of other innovations in the new MIWE roll-in e+. Many were developed in close cooperation with our customers.

Experienced users will be the first to notice the far larger Touch Control unit with a glass surface. That improves the legibility and operational safety. And one other thing will be immediately apparent: the new status light, with LED lights that are visible from a long distance; various colour codes and a significantly larger illuminated display, which shows in the bakehouse exactly what is going on in the oven, even from far away. And talking about light: Next, you will certainly notice the new baking chamber lighting. It adds 50% more light to the baking chamber – making it even easier to assess the exact condition of the bakery products from outside.

Not immediately evident from outside, but impressive from the outset are the hygienic improvements in the rack oven. For example, the rotary table, with a one piece base, prevents dirt deposits in corners or edges. By the way, that also makes it even more robust. The inner surface of the door of the new MIWE roll-in e+ is also completely flush (and for energy reasons has insulating glazing), which is hygienically advantageous. ➤

Flat inner surfaces make cleaning considerably easier – on the left side the hygiene-friendly inside of the door with additional energy-saving insulating pane.



The control column now has a considerably larger Touch Control system with glass display; the integrated, brightly beaming status light still indicates the operating mode of the oven.

The entire system exterior is splash-proof, and the interior can be washed wet as required for hygienic design. The new MIWE roll-in e+ therefore corresponds to modern hygiene management requirements.

In this context, another innovation is also interesting: The optional core temperature sensor for the MIWE roll-in e+. Though these sensors are standard equipment in other systems, in particular kitchen appliances, our rack ovens are still the only ovens of their kind to

feature core temperature sensors. That may be due to the fact that the rotating racks do not allow for simple solutions.

As a result, MIWE relies on a special wireless multipoint sensor, and therefore needs no wired connection to the outside. On one hand, sensors like this have technical baking advantages: Anyone who wants to can use this to perfect the baking process (with reliable reproducibility) by baking until a specific core temperature is reached. But the core temperature sensor can also be ad-

The optional remote display – integrated elegantly in the steam hood – is lit up with LED technology to the front and downwards. The status information can therefore be read both from higher points as well as from confined working positions and almost every angle.



vantageous when it comes to ever stricter hygienic requirements.

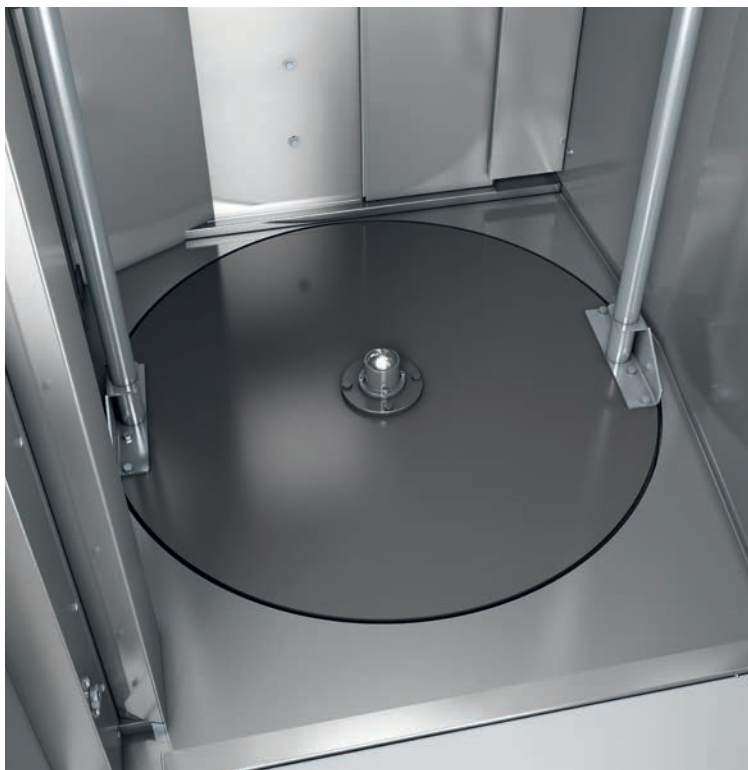
The sensor can also be used to log the core temperature curve – and thus to document it in accordance with the requirements of the hygiene directive.

Or look at the door of the rack oven:

A future option will allow it to be opened and closed automatically with a motor (soft-close function). So the operator no longer has to turn a handle or push the door to the lock position against the resistance of the seal, they just have to move it into position and it closes by itself. It opens without a turning motion and excessive force too – simply push a button and the door unlatches; all the operator has to do is pull it open.

The heat storage wall retains more energy in the baking chamber, facilitating batch-after-batch baking, will in future be included as standard free of charge in the MIWE roll-in e+.

Like all good things that made up the previous versions of the MIWE roll-in e+, and are of course also present again in the latest model: the patented air volume control MIWE air-control for example, which finely meters the quantity of baking energy transferred via convection and balances the heat transfer characteristics individually for different baked products together with the revised temperature regulator MIWE delta-baking; the powerful steam unit, which, like a heat exchanger, is located at the rear of the flue gas duct in an advantageous position for energy use; or MIWE flexbake, the clever automatic system for partial loads. By the way, as we not only maintain that the MIWE roll-in e+ is probably



the most economical rack oven in the world, but are happy to provide evidence of this at any time, we will be offering an optional energy meter and an energy consumption display. That gives you your actual energy consumption in cold print, showing you personally what you save each day with a MIWE roll-in e+.

And if you find that nothing less than sensational yourself: We will be happy to take the time to demonstrate the many advantages of the new MIWE roll-in e+ to you.

Visit us at iba!

Or write to us. All you have to write is "New MIWE roll-in e+". ■

**Not only clearly more hygienic, but even more stable:
The rotary plate with complete floor covering in one piece.**

Just keep control

That is MIWE connectivity: **Knowing what is going on. Noticing in time where a response is wanted. The ability to intervene at the correct point. Any time and anywhere.**

Just imagine: you have MIWE baking stations in all your branches. All of them are connected to the Internet via a secure access connection, and from there linked to an equally secure central data server. Depending on the connection type, all status data from the baking stations is gathered there continually or at regular intervals.

As long as you have the authorisation to do so, you can enquire which products were baked when and in which branch, on which baking stations and in which oven, how much energy was used, when the baking stations were left unused and whether they were set to the energy-saving Eco mode, switched off completely or operated at full heating capacity.

You can see at a glance whether a fault or other irregularities occurred and when, for example, maintenance work was carried out (and when it has to be carried out next time). The cycles in which cleaning processes were carried out can be verifiably documented at any time.

You can then create wide-ranging analyses for the optimisation of branch outlets via the usage profile: for example, for making decisions about a product range and offers (e.g. when could an additional snack range be integrated optimally into this branch?), for energy efficiency optimisation (keyword: peak load management) or for a sales forecast for the upcoming days and weeks (keyword: optimal product density with minimised returns). Users can monitor or even control the ovens from the preparation room or from the till. Finally baking programs installed in the branches are managed from a central point only – at district level or at the headquarters.

Is this all just dreams of the future? No, it's possible with MIWE.

With the MIWE connectivity project, MIWE has already created the conditions to enable connections on all levels and thereby generate genuinely useful applications.

MIWE connectivity is the bridge that creates connections. For us this is a question of creating technological networks, but it's not only about technology. MIWE connectivity comprises more and begins much earlier: Where people interact with machines – at the user interface of our control systems. Since simply inserting the correct plug into the correct socket is not sufficient here, more gumption and effort is required for the ideal connection. But even here, a connection must work for the result to be good! With the new MIWE go! control, we demonstrate how a contemporary human-machine interface can look: smart, simple, appropriate and yet elegant. You can find out more in a separate article in this MIWE impulse.

Of course, all our baking stations and also our large ovens and bakery refrigeration systems already come factory-equipped with an Internet connection.

When activated, it opens up opportunities as described above, from around-the-clock monitoring within our remote network to company-wide system management with MIWE winCAB, which logs and graphically displays all control processes (capacity utilisation profiles, temperature curves), and also allows central access to all equipment parameters – not to mention the analytical perspective to be gained on the basis of these data.

Running parallel to this, we are also increasing our access possibilities to our baking stations by other ways and means. Our new "apps" allow our users to take control of their baking stations from afar via smartphone or tablet (there is additional information about this in a separate article in this MIWE impulse).

And that is just the start of an exciting development. The good news for our customers is therefore quite straightforward: With MIWE connectivity, you are guaranteed to be part of a networked future from the very start. Clean, solid and secure. Typically MIWE! ■



(Almost) an Insider Tip

Answers regarding tunnel ovens and thermal oil at MIWE

A while ago, when we (perhaps slightly briefly, which is why we're picking up on it again now) announced our departure from the production of cyclothermal and for us not economically feasible tunnel ovens, we were confronted with questions from very different sides.

Firstly – and this made us really happy – from customers who, as long-term, highly satisfied users of the MIWE thermo-rollomat, wanted to know whether we could deliver an additional tunnel oven with the same technology to help expand their capacities. From their point of view and for their “high-quality products”, there was no real alternative to MIWE and the MIWE thermo-rollomat. In their eyes, everything about the company and the oven is just perfect: From the conceptual expertise, professional assembly

and commissioning, right through to the reliable support provided by the MIWE thermal oil service team – not to mention the consistently outstanding baking results.

Of course, we could and will continue to do so if the project and its framework conditions pass our careful review. A system like the MIWE thermo-rollomat has matured and been tried and tested, and we can thereby generally offer it to any interested party who has a genuine need for the level of product quality achievable with such a tunnel system.

It is therefore with good reason that you will come across this successful oven at our booth at the iba 2015 – in a metre-long cross-sectional side view, which shows in life-size how thermal oil baking works at MIWE.

With that, the second question that has been put to us time and time again has already been answered: “What, so you don't produce thermal oil ovens anymore?” One or two of our competitors would have probably quite liked to see that.

On the contrary: We have just begun the MIWE thermal oil offensive, with further improved products, focussed sales and an even more broadly based, qualified thermal oil service team. In the future of course, we will also have the MIWE thermo-static wagon oven (the one with the award-



„We have been producing our high-quality products on the MIWE thermo-rollomat with stone-plate conveyor for three years. The oven is distinguished by absolutely consistent baking properties. Due to the gentle radiant heat, the products retain a great deal of moisture and can therefore be baked at shops or by the consumer without suffering any losses in quality.“

Albert Hendriks
Pandriks Bake Off B.V., Meppel (Netherlands)

winning atmo-jet steam system, also available as a practical stand-alone version with integrated central heating boiler) and the MIWE thermo-express deck oven in our range. Both ovens are efficient, modern systems with completely satisfied users – and they continue to win over new fans.

If you have any questions concerning this or any other issues, we're there for you, as always. ■

„Since autumn 2014 we have been operating our first MIWE large-scale oven, a thermal oil tunnel oven with stone-plate conveyor. Order processing at MIWE – from the delivery to commissioning – is highly professional and to our complete satisfaction.

With the new MIWE oven, the centrepiece of our new baking range, we can now produce large amounts of baked products of unique, first-class quality and in this way meet the demands of the market.

Dipl.-Ing. Stefan Huemer
Bäckerei Fischer Brot GmbH, Linz (Austria)





Leading by

Practising what you preach – we appreciate this above all at MIWE. We are firmly convinced that those who encourage their customers to implement energy-saving measures must also set a good example themselves. Therefore, we have implemented an energy management system according to DIN EN ISO 50001 and have had it certified by an independent body.

One of the principles of our corporate policy is the economical use of natural resources. Of course, we are also interested in constantly improving efficiency. But our primary motivation actually lies somewhere else: in the knowledge that we all can and must actively contribute to protecting and preserving our planet's natural resources.

For this reason, improved energy efficiency is a fundamental principle for us, which is demonstrated in two ways: firstly with regard to our customers, for whom we produce particularly efficient systems with MIWE energy intelligent energy recovery solutions and for whom we make energy saving as easy as possible with our expert support.

Secondly with regard to ourselves: in the (further) development of our systems and components we have set ourselves the goal of reducing energy consumption by at least 5 % every year and we have also established this obligatory standard as a maxim for our own production (and administration). Our goal is to produce energy-efficient systems in an energy-efficient way.

example

Our energy management system, which has just been certified by an independent body, will help us in doing this. The installation of energy measurement technology and the continuous monitoring and evaluation of energy flows will allow us to determine where the energy used actually flows and be able to counteract this in a targeted way if necessary.

This is exactly the purpose and aim of MIWE energy's integrated energy management system: To create transparency regarding energy flows in order to first identify all optimisation potentials and then use them in a targeted way. The experiences we have made with MIWE energy and now with our own energy management system therefore also directly benefit our customers, especially if

they are considering implementing such a system. This can be worthwhile in many respects, not only due to the reduction in energy costs, but also due to the existing opportunities for subsidies, for example, and the prospect of receiving reimbursements for certain costs. Although DIN EN ISO 50001 is European law, funding and subsidisation policy are country-specific issues so conditions are slightly different everywhere. However, our energy specialists have sufficient international experience in order to assist interested customers from around the world with help and support.

Once again, the result is: When it comes to saving energy when baking, you are well-advised to call MIWE first. ■



The new freedom

Get the MIWE apps!

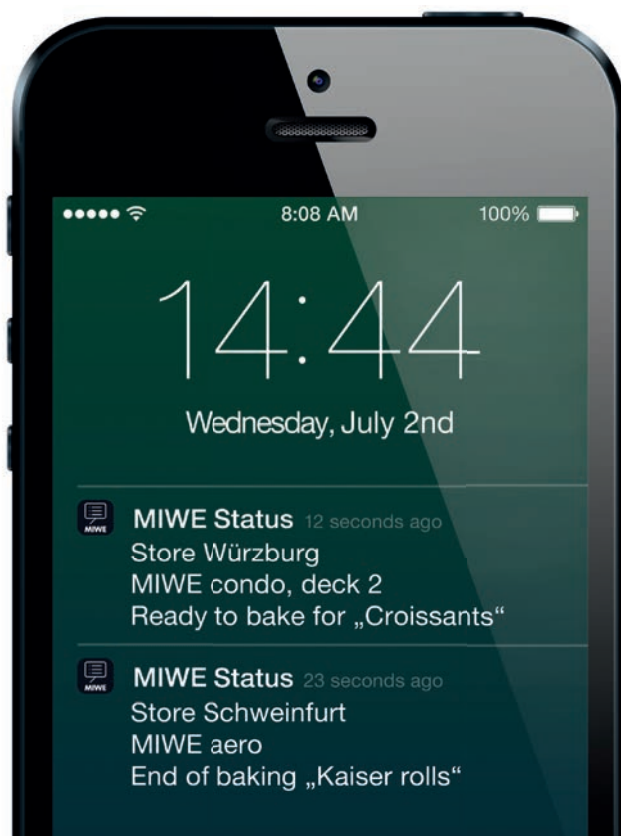
Do you have a smartphone? That was a rhetorical question! Of course you do – and probably a tablet too. Today, business meetings without smartphones and presentations without tablets are inconceivable. And who knows: Perhaps your customers can even pay with their smartphones? Mobile devices, as smartphones, tablets & co. are collectively known, are now everywhere, around the world, more powerful than some PCs and can be used for communication wherever a network is within range.

The fact that more and more people have, use and operate smart devices, and that this is increasingly taken for granted, has created an immense networked infrastructure, building user expectations inevitable for anyone with an eye to the future. Smartphones are now used for far more than telephone calls.

If you don't already do so today, you will soon use yours to change the volume on your sound system, choose your TV viewing, control your home automation and air conditioning or communicate with your car. Now, your smartphone also works with your MIWE baking station.

At iba 2015, MIWE will present two apps for baking stations in the MIWE connectivity category. They increase your flexibility and, in particular, your freedom of movement. Both allow you to keep an eye on your MIWE baking station from afar: one, MIWE messenger*, by sending you all key information on the status of the baking station to a smartphone, the other, MIWE zoom*, by enabling you to operate the baking station remotely as though you were standing right in front of it. Allow us to introduce them.

With MIWE messenger*, you can keep an eye on all baking stations and branch outlets (figure on the right) – even when your smartphone is in sleep mode.



■ *Always up-to-date:
MIWE messenger**

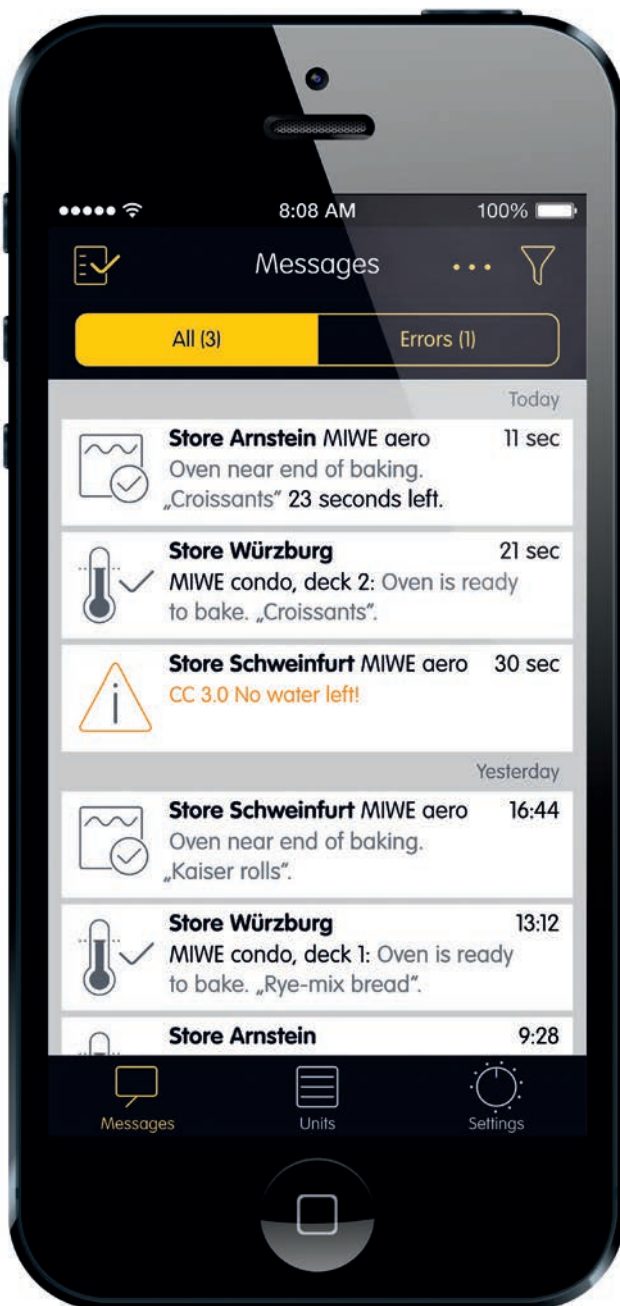
MIWE messenger* sends all key status information from one (or more) baking stations, e.g. "ready to bake", "end of baking" or "malfunction", immediately to your smartphone, with an audible and/or vibration signal, depending on the settings, but always with a self-explanatory text message, even when the smartphone is in silent mode (lock screen).

Many users benefit from this: The operators in the store, who have to receive deliveries, stack shelves or fill the next trays, while also keeping an eye on the baking station, because it is currently baking products. The branch manager, who wants to receive faults messages immediately and directly in the office (or wherever they are) instead of just on the baking station display. Or the district manager who wants an overview of how baking station X in branch Y was utilised in the past week, without having to visit branch Y just for this.

MIWE messenger* can now send all of them the information they require (and only this information, as the messages can be selected specifically) directly to their smartphone – of course one baking station can serve multiple recipients simultaneously.

For example, the baking station reports when it is ready for baking or finished baking, and it sends messages on operating conditions, especially faults. The app not only shows these messages, it also logs them with additional background information for 30 days.

That means you can also display all messages from the last 30 days



retrospectively, and filter them by message type, branch or baking station if necessary.

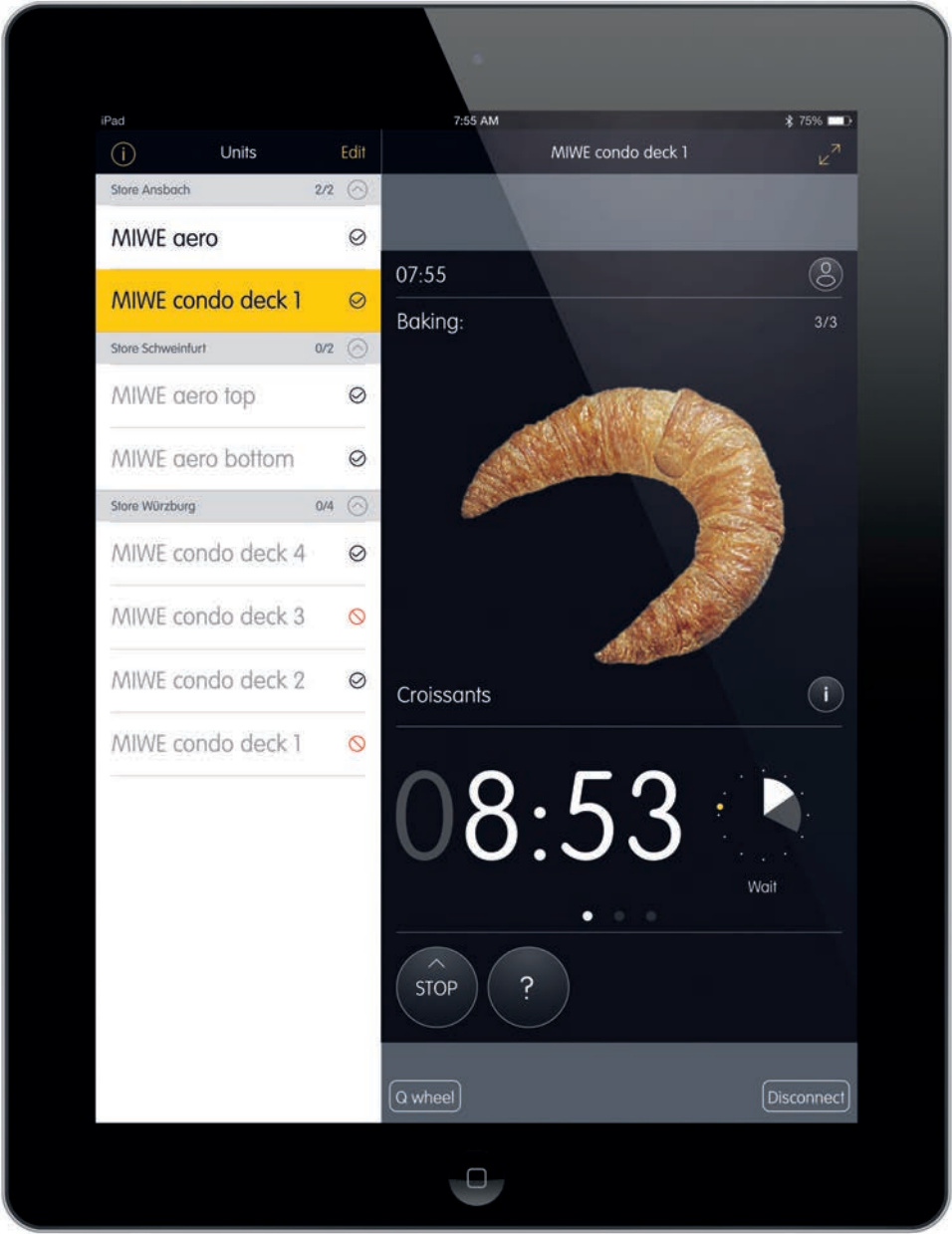
To receive the messages, your smart-phone must be connected to the Internet, either via wifi or conventionally via your mobile phone

network. As the MIWE messenger* only sends data in one direction, i.e. to your smartphone, it cannot be hacked.

MIWE zoom* not only provides you with a complete overview, but also enables you to control each oven exactly as if you were standing right in front of it – regardless of where you are.

■ *Free to move at last:
MIWE zoom**

MIWE zoom* allows you to operate and control your MIWE baking station remotely as though you were standing right in front of the oven. That's where the name comes from: The app lets you zoom in on your baking station virtually.



On your mobile device, ideally a tablet with a high-resolution screen, you see exactly the same display as on the baking station's Touch Control unit. The app mirrors the control unit, no more and no less. The distance between the baking station and tablet can vary depending on the installation and application. It can be a few metres if you want to select the next baking program on your oven from the preparation room. However, you can also bridge long distances, for example if you want to check the status of your baking stations from a central office, or configure them from there (for example auto-start or cleaning times).

All that saves a lot of travel time, gives you a better insight into and greater control over the operating processes (up to and including quality assurance applications), and if necessary, even speeds up troubleshooting if a fault occurs.

The technical requirements for this are simple everyday configurations for experienced network operators. Put simply, both sides must be connected to the branch network, i.e. your baking station (via cable/router) and your tablet (directly, e.g. via wifi or secure VPN connection through the Internet).

In the end, the app's range is only limited by the individual configuration of your branch network. Once the baking station and tablet are connected via your local branch network, you can access your baking station on your tablet as long as you are within wifi range.

If you can access your baking station from your tablet via the Internet, you can access your MIWE baking

station directly from anywhere you have Internet access.

A range of security measures ensures that you (and your authorised employees) are really the only people with access to it.

Of course, MIWE zoom* also allows you to access multiple baking stations in multiple branches (provided they have an Internet connection). Practically however, only one active connection is possible at a time between a baking station and MIWE zoom*.

■ *Where can I find the MIWE apps?*

Both MIWE apps will be available in the app stores - iTunes for Apple and Google Play for Android. In the store, search for MIWE or directly for the MIWE messenger* or MIWE zoom* apps. They download and install in one step.

■ *What equipment do my baking stations need?*

To communicate with the MIWE apps, your baking station needs a network connection (newer MIWE baking stations without network connections can be retrofitted) and access to an existing network (for MIWE zoom*, LAN/wifi or Internet depending on the range required; for MIWE messenger*, Internet access, e.g. via Ethernet/LAN, is always required). For MIWE zoom*, the Touch Control MIWE TC or TC-U control units are also required. MIWE messenger* also works with the fixed program control MIWE FP.

All baking stations already delivered must be upgraded to the latest control system software version in order to run MIWE messenger*. ■

Which mobile devices can run the MIWE apps?

MIWE messenger* is optimised for use on smartphones, as they are ideal for its functions due to their compact dimensions and their popularity. The smartphone needs iOS 8.0 or Android 4.0 operating systems (or better). MIWE messenger* can only be run on a tablet with iOS (e.g. iPad). Contact us for further details on supported operating systems.

MIWE zoom* "mirrors" the operating interface of the baking station(s) exactly at a ratio of 1:1. As a result, the mobile device screen must be large enough.

This app is therefore optimised specifically for use on tablets with approx. 10-inch displays – e.g. iPad Air.



Just know how

How MIWE smart engineering helps you harmonise your production and boost your business success

Bakehouses are complex organisms, and a wide variety of factors must be borne in mind when organising them to create a cohesive unit: of course there's the range of products, the quality required and the workflows needed to attain it, the sequences, space requirements and resulting logistical parameters, not to mention the energy demand, maximum energy efficiency or personnel scheduling.

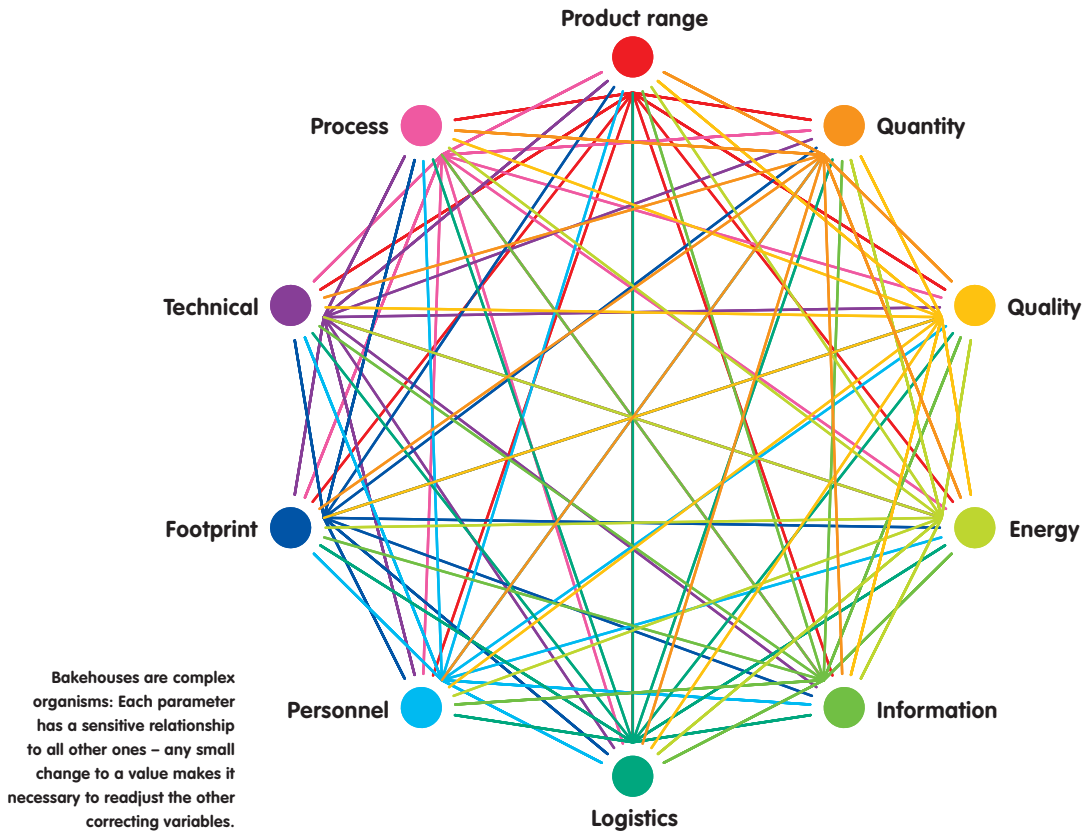
The MIWE smart engineering bakehouse cycle presents the most important of these factors intentionally in a dynamic context, as they balance one another out in a delicate equilibrium. Every experienced baker knows that interventions in one of the factors always require corrections to one or even more other factors. Changes to the range can lead to changes to the process engineering, energy demand, material flows and logistics, and



possibly even the space requirements. Changes to the process engineering to improve quality can call for changes in the technology used and the internal-bakehouse logistics. Quantitative or qualitative changes to personnel must also be compensated by changes elsewhere, for example in a higher level of technological automation. The list of examples could go on – you surely know of similar cases from your own experience.

Given these mutual dependencies and the fine balance, it soon becomes clear that a consistent production concept and smooth production flow are based on more than the meticulous consideration of individual details, even one as important as the oven. Instead, whenever you reorganise production, you need to take a holistic approach to ensure that the concept is successful, i.e. to create a smoothly running entire organism. ➤

To design a bakehouse so that everything always functions perfectly one needs a 360-degrees view.



As a result, MIWE has been offering its customers exactly this kind of holistic support for many years: Comprehensive development of bake-house and production concepts based on knowledge and analysis of the overall situation.

We accompany our customers from the initial target analysis (which products and processes are involved?) to system concept development, design and implementation planning, manufacturing and assembly to commissioning and beyond (with the corresponding service and maintenance concepts) until far into the use phase.

The tool we use for this is MIWE smart engineering. The ambitious goals we aim to reach in this way are our customers' goals: high productivity,

consistently high product quality, high system availability, high flexibility in terms of future use. Most of all, we aim to minimise overall operating costs over the full life cycle of the systems (Total Cost of Ownership).

Other engineering service providers probably make similar promises. So what makes MIWE's approach different? What makes MIWE engineering smart? What makes MIWE the preferred partner? On one hand, we are able to offer our consultation approach thanks to our profound expertise in all areas of process engineering and technical implementation options, in particular from the wealth of experience with countless, highly diverse production facilities around the world, for which

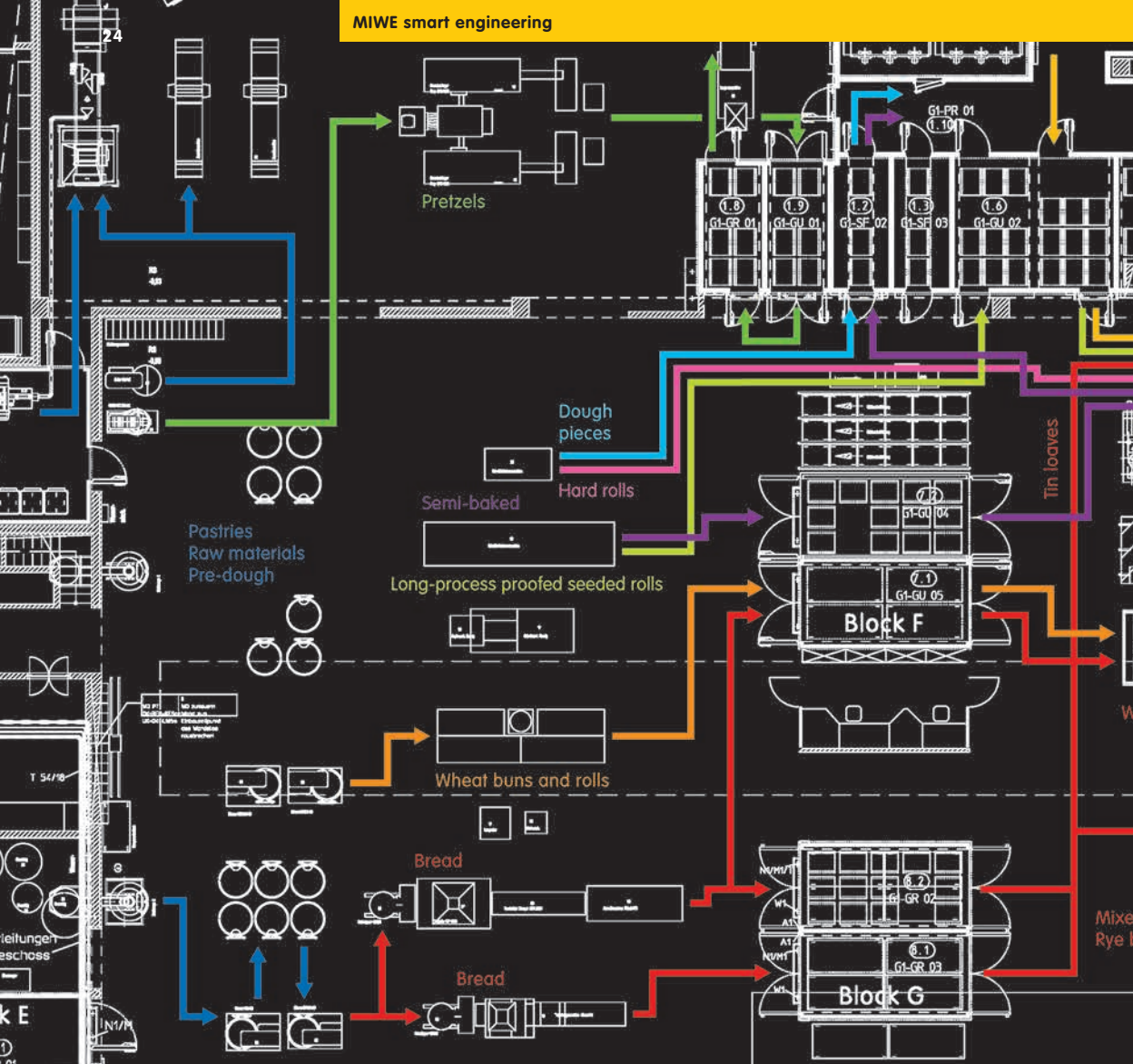
we have developed, planned and successfully implemented concepts like this. Engineering at MIWE always refers to engineering services with well-founded process expertise. For our customers, the fact that we have mastered all temperature-control process stages of baking, from proofing and baking to cooling and freezing, and that we are highly familiar with other areas, from raw materials and recipes to delivery logistics and in-store baking, is definitely an advantage. It minimises interface risks (or last-minute surprises) from the outset.

Another clear advantage for our customers is that we have detailed knowledge of the various baking technology solutions, i.e. the different dough processing methods and logistics and organisational processes of baking, from fresh production to baking of half-baked products, with their strengths and weaknesses, and can evaluate all of them (especially since we were involved in the development of some of the processes, such as baking small frozen products). This expert and unprejudiced 360-degrees view helps us choose the solution which best fulfils the customer's expectations from a range of different potential solutions.

Many of our customers see the fact that we are not focussed on a single technology, which we force upon them as the only true solution just to get an order, but can always choose the technology most suitable for their application from the full range of options, taking their products, quality, processes and future

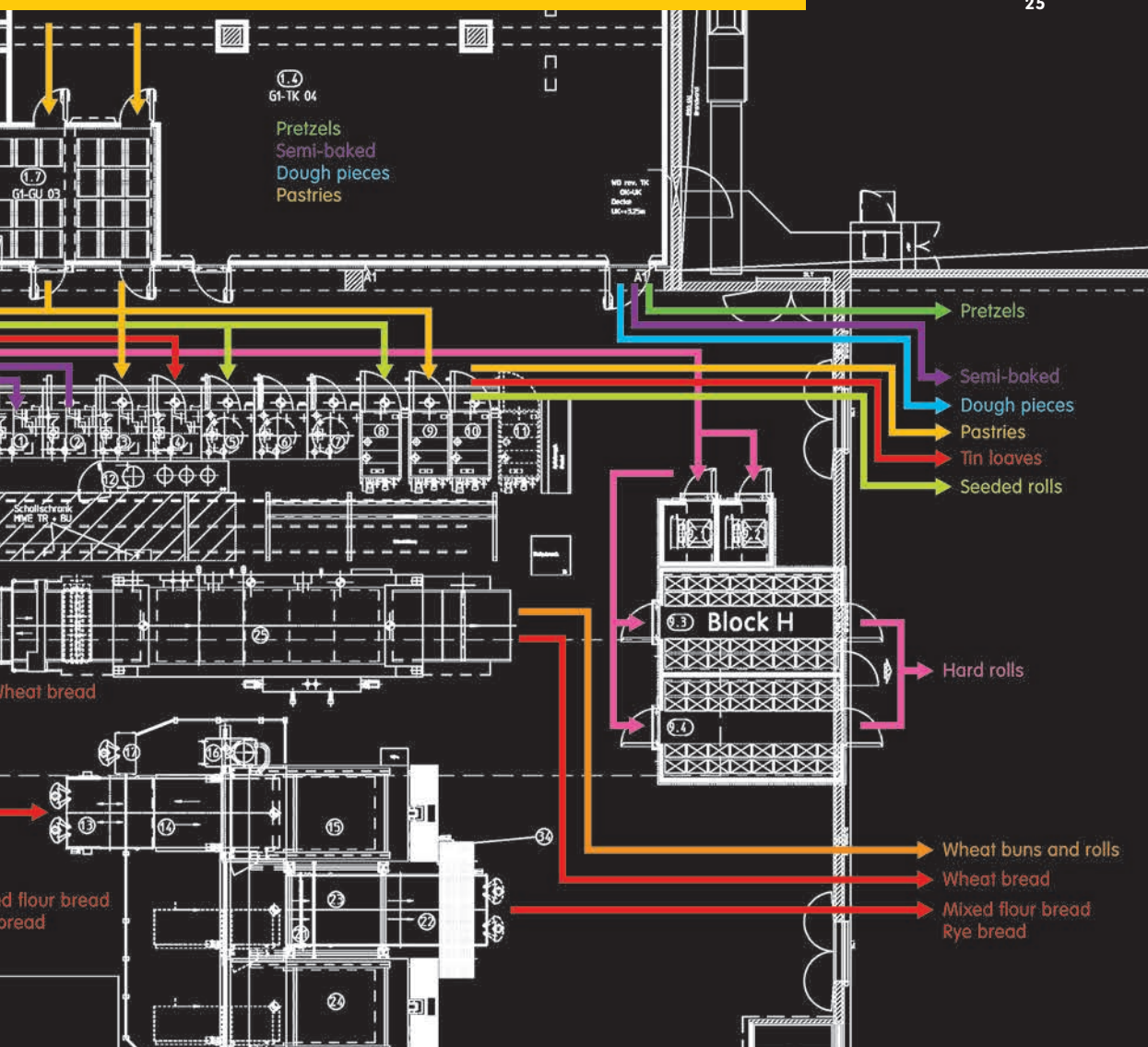
Time is money: At full capacity, it quickly becomes clearly whether everything is "flowing smoothly" in the bakehouse.





into account, as another advantage of MIWE. Let's take ovens as an example: From deck ovens to wagon ovens, to tunnel ovens, from heating gas to thermal oil, from electricity, gas and oil-fired ovens, we offer virtually every conceivable system in all possible sizes and dimensions. We are used to creating the ideal combination of standard technology and custom solutions for every project. That is the only way to create truly ideal solutions for customers, from artisanal bakehouses to industrially run companies.

That includes excellent familiarity with both rolling production (we were the first to make them popular in Europe) and with conveyor-supported logistics, using different combinations. In short, we know our way around various types of conveying and feeding technology and can therefore implement virtually every conceivable level of automation, from manual to robot-based solutions for our customers. Because we always consider production concepts with this holistic approach, we have long been able



to offer our customers combined solutions and solution combinations which add value in a variety of ways. Take bakery cooling for example: Under certain circumstances, a combined cooling system, which feeds all cooling consumers from a central unit is far more efficient, compact and reliable than multiple individual cooling systems. Once this decision is made, another form of combination makes sense: Combined energy systems for bakery cooling, which uses the waste heat from the cooling system to provide

the proofing units with cost-effective energy and particularly gentle heat. And speaking of energy: Years ago MIWE was one of the first manufacturers of bakery processing plants to recognise the importance of energy efficiency and energy recovery and, on the one hand, produce systems with optimum efficiency under the MIWE energy label (such as the MIWE roll-in e+, probably the most economical rack oven in the world) and, on the other hand, market system components and combined systems, like the

Detailed flow charts already show in the planning phase the optimum networking of all material and product flows.



MIWE eco:nova, which recover as much of the technically inevitable waste heat in baking processes as possible with maximum efficiency and intelligently re-use the recovered energy in the bakehouse. Comprehensive monitoring (e.g. via

MIWE eco:control) guarantees continuous control and optimisation of all flows of energy. That is what MIWE smart engineering is all about: Production and energy flows developed from a holistic perspective, which mesh delicately like the finely

MIWE smart engineering:
seven steps to success

Target analysis:
Products & processes

Concept development

Design planning

coordinated clockwork cogs and utilise valuable potential.

As we have many years of international experience in this art, MIWE's customers can always rely on our concepts taking the latest rules, the latest regulations (such as the fluorinated greenhouse gas regulations) and the latest subsidy conditions into account.

Finally, MIWE smart engineering also takes the dynamic nature of the world of baking into consideration. Nobody can reliably predict how their own range, production methods, or business will develop in ten or fifteen years. We realised long ago that these future prospects make flexibility and openness to future developments a welcome benefit for our customers.

That is why instead of rigid monolithic units, we recommend open, variable bakehouse and production concepts, which allow our customers to react highly flexibly to changing trends, new customer groups, changing quality standards, as well as to successful growth, without having to restructure the entire production system or most of it. For us, that is part of being fair to our customers.

Actually, that makes it simply logical that more and more customers are coming to us as a supplier of ovens, cooling technology or energy efficiency solutions for support with restructuring their production at an early stage. Also (i.e. beforehand), they ask us to model their future production process from the

context based on the planned products, maximising all savings and synergy effects throughout their production facilities. The equation is (likewise) slowly becoming well known: smart engineering = smart baking. Or to put it in plain English: Anyone who puts our expertise to work for themselves at an early stage will get a better solution in the end: a harmonious, holistic, smoothly running, future-safe production system. ■

Sophisticated concepts save a great deal of money; whether an MIWE athlet operates numerous ovens (extendible!) in parallel or – as shown on the left – more than 20 baking ovens only require two chimneys.



Implementation
planning

Manufacturing
& assembly

Commissioning

Use phase

Just get started: MIWE go!

MIWE control units have always been ahead of their time. However, because time doesn't stand still (and in this case, among other reasons, because smartphones etc. are rapidly changing our operating options

and habits), we created an entirely new user interface for our Touch Control MIWE TC control unit: MIWE go!, the simplest, most intuitive and smartest MIWE control unit ever.

Baking stations are now operated by a wide variety of people, from expert master bakers who can control the finest aspects of the baking process, to branch managers who are particularly interested in the scheduling of operational workflows, to temporary workers with minimal baking expertise, but who still must be able to achieve consistently high baking quality as simply as possible. ▷

07:55 Programs

Change programs:

Kaiser rolls

	1	2	3
⌚	01:00	14:00	3:00
📏	240°	230°	235°
💧	100%	80%	80%
📏	225°	220°	220°
🔥	100%	80%	80%
⏸	0	0	1
🔊	0.36	0.00	0.00
⚙	zu	zu	zu
✖	0	0	0

Σ 18:00

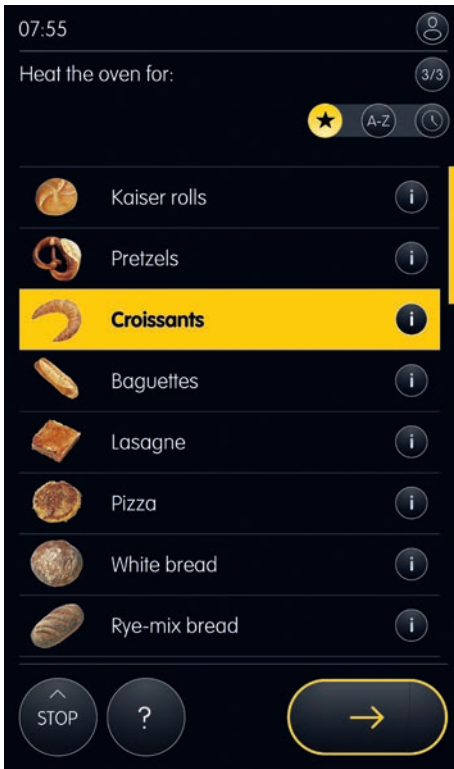
? ✖ ✓

Creating baking programs? Nothing is easier! In the table view of all parameters, it is sufficient to click on the respective box in order to enter or change the respective value.



MIWE go! brings another new function to the deck oven MIWE condo, the partial load function. You only have to enter the number of trays loaded on the display, the oven then automatically calculates the baking parameters for this load. Once again, we have made baking a great deal easier.

In easy mode, the user does not need any prior knowledge at all for baking. Simply select the desired product from the overview (ordered chronologically, alphabetically or by favourites)...

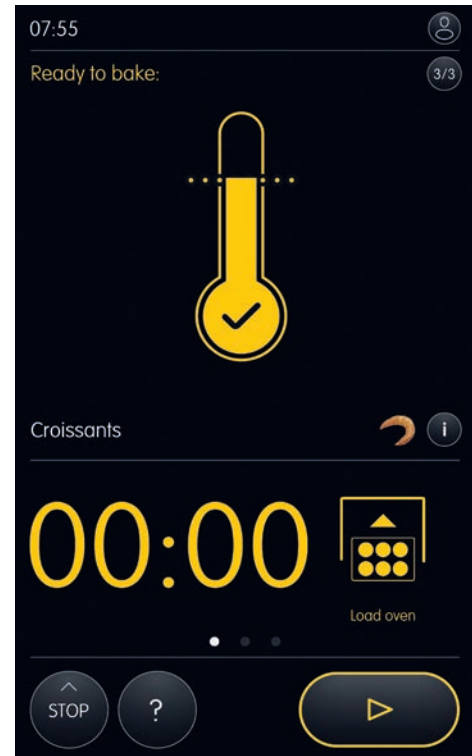
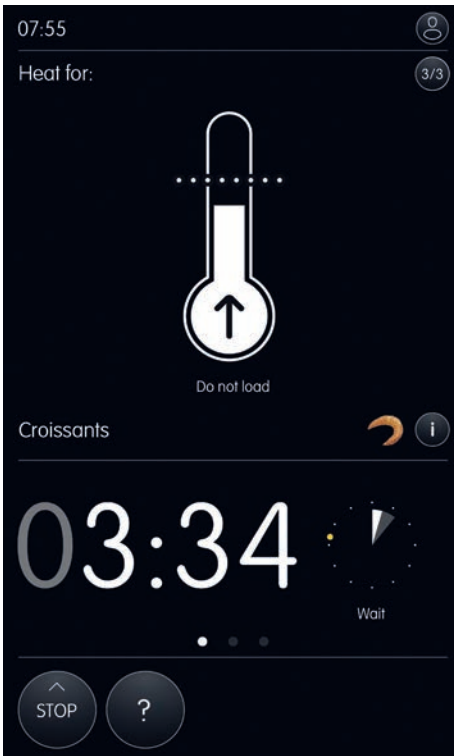


All these users have completely different requirements and expectations when it comes to an oven's control system.

As a result, MIWE go! offers multiple role-specific interfaces and sophisticated authorisation management as standard. That means that every user gets exactly what they need. No more. And no less.

For the new interface, we examined all operating workflows thoroughly with specialised designers and created MIWE go! to enable the control unit to guide users directly and intelligently through every operating process, in particular those most used, and in as few steps as possible, without having to dive into any deep menus, and with a Help function that can be called up (in multiple languages, of course). With multi-phase usability tests of the various roles, we optimised the processes

... and the oven already begins to heat up (outer left). Once it has reached the required temperature, it requests to be loaded and confirmed ...



until we reached the result we wanted: an intuitive interface that can be used virtually without any prior knowledge, where every tester immediately knew what they had to do and when they had to do it to achieve a given outcome.

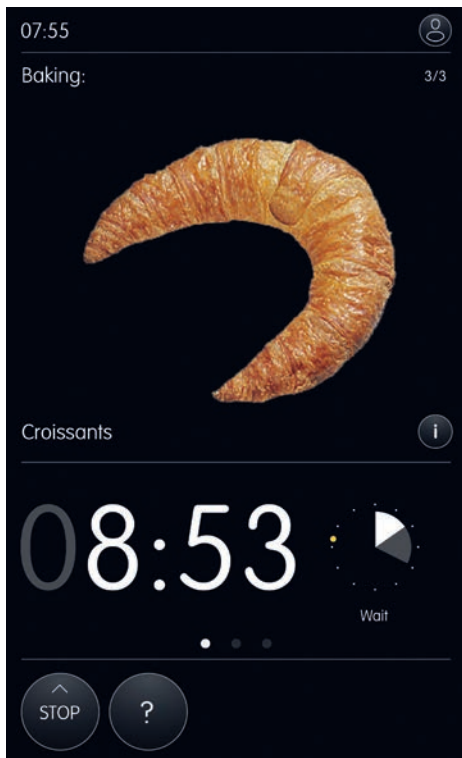
That saves you expensive training and operating time, and minimises operating errors and failures caused by users.

This also included limiting the screen content specifically to the information required for the current use situation. The screens are clear and organised. Anything that has to be visible from a distance (e.g. the remaining baking time) is enlarged and emphasised with a high contrast. Different groups of information are shown in different colours.

Clear symbols and icons speed up training and make it easy to understand all of the relevant contents.

Finally, we also included the familiar scroll and swipe gestures from smartphones and tablets in MIWE go!, making it far easier to browse lists or individual pages of a multipage display, which help show more information in less space with the familiar dot-shaped page indicators, and are also new in MIWE go!.

Speaking of lists: The classic list in an oven control unit is the overview of baking programmes. They can be long, and until now were only available in numerical order. Now we have added more convenient functions: You can now show the baking programmes in an alphabetical list, a history list of the most recently used programmes, or even more practically, a list of favourites. That makes accessing the right baking programme child's play, even from longer lists – and faster than



... in order to subsequently "execute" the selected baking program. At the end of baking, the user is acoustically and visually requested to remove the finished product (right figure). Operating errors are almost impossible.



ever. Further information can now also be saved for every baking programme – above and beyond the actual baking parameters: for example the corresponding proofing time, any steps necessary before loading, filling information, contents etc.

MIWE go! offers comprehensive configuration options, as every baker has their own preferences for the design of the interface and authorisation management.

Just one example: How do you want the control unit to react if an operator tries to start a baking programme before the set baking temperature is reached? You can set the required reaction on MIWE go!. A configuration setting allows you to save a rule to prevent baking if this is the case. However you can also allow it, with or without a warning – the choice is yours. The Eco mode control parameters (i.e. when the ovens are to reduce the temperature automatically to a figure of your choice) can also be configured by users with the right authorisations.

See elsewhere in this issue of MIWE impulse to learn how you can control your oven remotely with MIWE go! and a dedicated app.


One more thing: The new MIWE go! is not just simple, intuitive and smart. It is also simply beautiful – how could a MIWE product not be?

And because it's easier to experience the whole operating philosophy behind it personally than in dry descriptions, we cordially invite you to visit us at IBA!

Test the new MIWE go!.
We are sure you will love it. ■

A very special treat: The integrated database with complete recipe.

Product information



Product name

Croissants

Product ID

47

Proofing time

30:00

Baking temperature

235°

Baking time

19:30

Tray load

No. of trays

2/2

Load

4x3

Layout

Straight

Steps

1. Defrost for 20:00 minutes

2. Proof for 30:00 minutes

3. Bake for 19:30 minutes

4. Cool for 10:00 minutes

5. Place in the display (do not pile)

Contains

Wheat flour, Water, Butter, Yeast, Liquid egg, Sugar, Improving agent (malted wheat flour), Wheat flour, Wheat starch, Sweet whey powder, Wheat gluten, Emulsifier (sunflower), Flour treatment agent, Amylase (cellulase), Salt, Skimmed milk powder, Barley malt extract

Baking program

Version 3, Date 11.09.2015

Left side: In professional mode, the new MIWE go! shows you all process-relevant data. You can simply swipe (like on your smartphone) to switch between displays.

The improvement

Linguistics dictates that an “ideal” cannot be improved upon, as it is the expression of an absolute. But our engineers and developers are not rattled by such linguistic sophistry. If they discover potential for improvement, they put it into practice.

This applies particularly to the MIWE ideal e+ deck oven. Newly developed from scratch and with a host of important improvements, MIWE will present it at iba 2015.

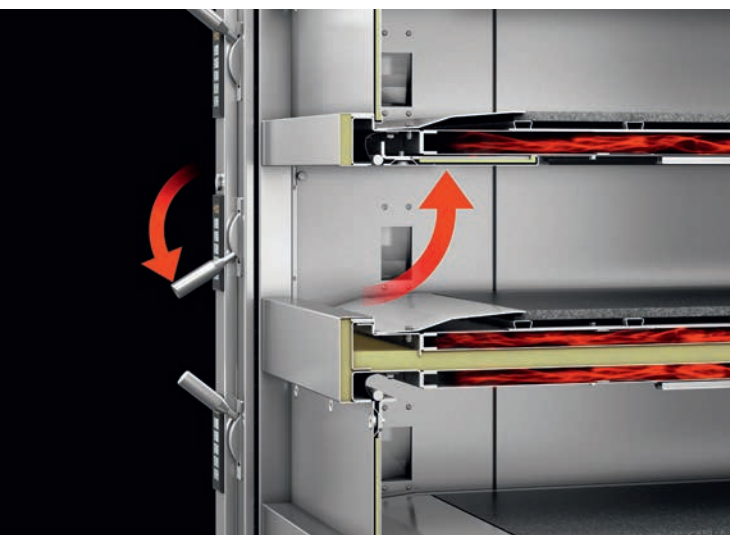
The most significant innovation concerns the baking results of the classic MIWE oven: the flue gas ducts of the new MIWE ideal e+ were completely re-designed (based on computer-supported flow simulations, amongst others things). The speed at which the flue gas flows through the oven is now lower due to its significantly larger cross-sections, thus giving the oven a fundamentally improved evenness.

The baking characteristics are generally more gentle and the danger of burning significantly reduced. Since the new MIWE ideal e+ is also equipped with MIWE variobake – the control system for finely adjusting the baking results – bakers will now enjoy even more possibilities and a flexibility in defining baking characteristics that until now no one thought was possible.

And something else that will please our customers: the new door design. The doors are now vertical when closed and horizontal when open so that tall products, particularly combinations, are able to use the entire height of the baking chamber. The view of the products is also improved once again with the new door. The energy efficiency of the oven (and the air conditions in the bakehouse) is benefited by the doors, which are now insulated.

The new MIWE ideal e+ is also now available as a triple-circuit, which ensures even greater flexibility while using this deck oven.

So “ideal” can be improved upon. We will happily demonstrate its superlatives to you in person. Come and visit us at iba 2015. ■

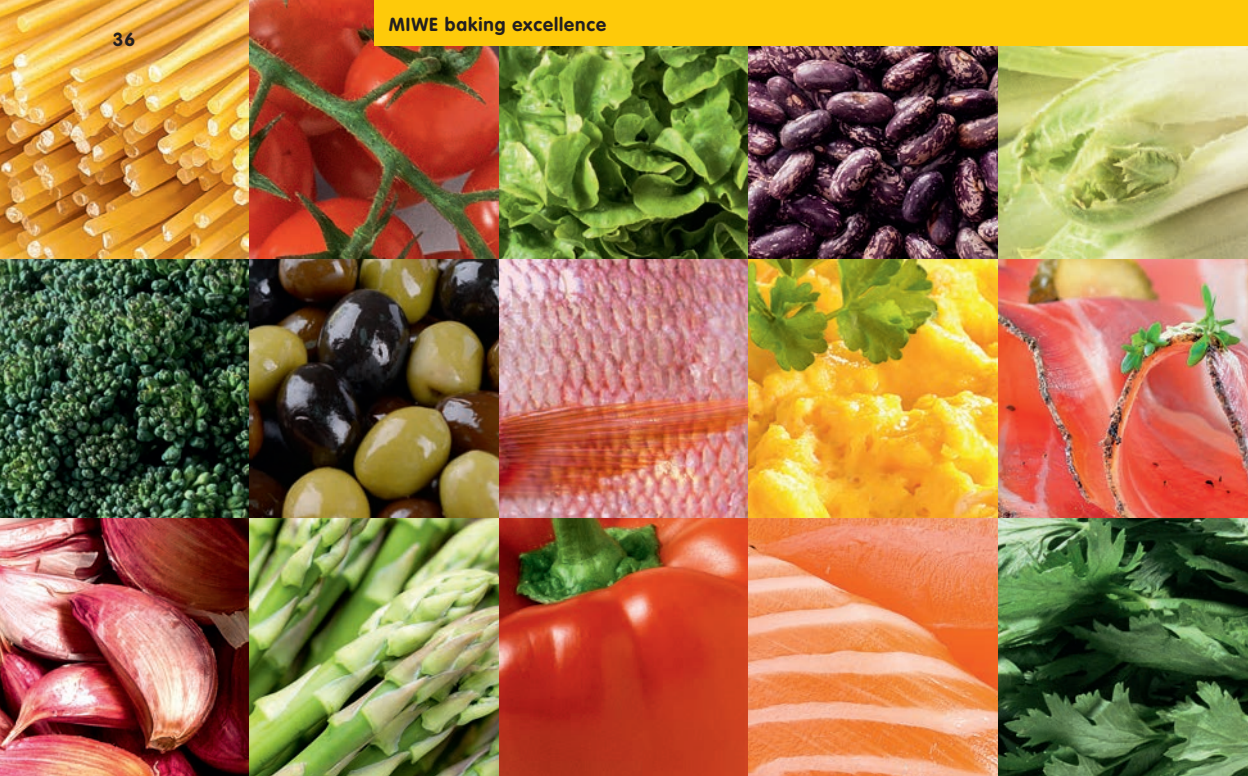


The insulated doors of the new MIWE ideal can be opened fully to 90 degrees. This allows the entire baking chamber height to be utilised in the event of high products, in particular combinations.

of the absolute:

The new MIWE ideal e⁺





Ready for Snacks



On-the-go consumption is booming and bakers have everything they need in order to join the leaders in the snack industry. And now more than ever, since MIWE will soon present various oven systems with special gastronomic features.

Peter Becker, the president of the German Bakers Association (Zentralverband des Deutschen Bäckerhandwerk), made it crystal-clear: "snacking" and "to go" are the growth drivers of the sector. The market researchers from the Nuremberg-based NPD Group are forecasting that the bakery trade in Germany alone will achieve a turnover of almost 3 billion euros in 2015 with snacks.

Of course, those who have taken up the cause of helping bakers to do better business cannot ignore this trend. For this reason, MIWE had already equipped the MIWE aero e+ convection oven with a special restaurant function years ago. This function gastronomically "optimises" the "top of the class" among the in-store baking stations with two technologies.

One of these is the permanent steam technology which allows for adjustable, continuous steam input, as well as vigorous steam power for baking, and therefore considerably expands the MIWE aero e+'s range of applications, from perfect baking of frozen pieces and hot

air baking, to (steam) cooking, to regeneration (e.g. of plated meals). And another one is the multipoint special core temperature sensor, which allows each product to be cooked accurately and precisely from a culinary perspective.

Whatever your gastronomic concept looks like or however it develops; whether you would like to add fish, potatoes, vegetables or crispy roast pork in addition to your baked goods to your menu or would simply like to fully regenerate convenience food: All of this and much more can be immediately achieved with a MIWE aero e+ with restaurant function, as both technologies are completely integrated in the new MIWE go! control system.

The practical lengthways loading considerably simplifies handling when using the oven.

Useful and versatile, this restaurant function will also be available as an option for the MIWE econo convection ovens in the future and also for the new MIWE gusto, which already offers several essential innovations, even in the basic model. The MIWE gusto, one of the most compact fresh-bake ovens on the market, is thoroughly "a real MIWE"

*Culinary delicacies
revitalise
your business!*

Creates additional turnover for you: The restaurant function – which has been available in the MIWE aero e+ for a while – is now also available in the handy MIWE gusto.



that proves that excellent baking properties and minimal dimensions can be combined in an attractive package. At the iba 2015, MIWE is now presenting the MIWE gusto with brighter, energy-saving LED lighting, a USB connection (e.g. for easy transfer of programs) and the new MIWE easy clean plus or MIWE cleaning control cleaning system (as an option). These systems ensure fully automatically that the baking chamber stays shiny.

The latest addition to the MIWE product family, the new MIWE gusto snack, is intended specifically to meet the demands of snack baking. In addition to the restaurant function described above, it can also be equipped with the option of a top-heat and grill function.

A heating coil above the baking chamber ensures the boost of heat required for browning and gratinating. And the new MIWE go! touch

screen control system which is very easy to operate. An insertable stone plate (optional) additionally stores energy in the baking chamber. Of course, both systems can also be perfectly stacked on top of one another as they are built on an identical footprint. And both come with conventional mains voltage, and therefore do not require a three-phase alternating current.

Our "little one" is the best option for anywhere that food is to be perfectly baked, steamed, proofed or cooked "au gratin", in a comparably small area, and is a perfect starting point for improving your snack business.

Now you just have to get started. ■

The MIWE gusto snack:
Your perfect partner for the lucrative take-away business.





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■ *Fair dates*

- ▶ **Alles für den Gast**
Salzburg / Austria
07.–11.11.2015
- ▶ **Europain**
Paris / France
05.–09.02.2016
- ▶ **Gulfood**
Dubai / VAE
21.–25.02.2016
- ▶ **Internorga**
Hamburg / Germany
11.–16.03.2016
- ▶ **Modern Bakery**
Moscow / Russia
14.–17.03.2016
- ▶ **Sachsenback**
Dresden / Germany
09.–11.04.2016
- ▶ **FHA**
Singapore / China
12.–15.04.2016
- ▶ **ÖBA**
Wels / Austria
23.–25.04.2016
- ▶ **IBIE**
Las Vegas / USA
08.–11.10.2016
- ▶ **südback**
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