



MIWE impulse

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Thinking in terms of the big picture is something we learned from bakers. Bakers have always known that all parts of the whole have to fit together. If something goes wrong during proofing, it can't be fixed during baking. If the oven does not bake evenly, the best long-time dough methods will not make up for it. And if kneading capacity does not match the baking area, sooner or later there'll be trouble in the bakery.

Interrelated process connections as they exist in a bakery simply through the requirements of dough as a raw material, also exist in the store area. The conditions and factors are somewhat different (and have different degrees of influence) and include: Rotation of goods, area output, personnel cost management, and end customer-related hygiene and safety concepts – just to name a few.

Nothing can be done in this area with tunnel vision. It is no longer enough to set up functional islands in a bakery (or in a store), without looking left or right. All of our systems, from oven to bakery refrigeration, from loading and transport technology to MIWE energy are part of larger organisational and functional inter-relationships. They achieve their full potential because they have been conceived and produced with comprehensive knowledge and full consideration of these relationships.

Looking beyond boundaries and seeing the whole picture – this is one of the guiding principles of our company. It is something we take into consideration in our outlook on our markets and customers, their organisational forms, product ranges and processes. But it is also true for how our staff interact with each other here at MIWE as well.

Highly-trained and experienced specialists from very different areas each with their own perspectives work together in competence teams to develop systems holistically and contribute to a "production flow from a single source."

This provides many of our customers with a decisive advantage. Perfectly integrated system solutions clearly make it easier to concentrate on what is most important: Doing better business with better baked products.

And that is precisely what I wish for you.

Sabine Michaela Wenz



Baking expertise has many faces: On page 10 we present the seven basic baking worlds at the POS .

Extending the lead

Is it really possible to make the best better? MIWE engineers can. The rack oven MIWE roll-in e+, now available in a new version, proves that once again. It shows that intelligent engineering combined with energy efficiency can also always improve the quality of the baking products.



The MIWE roll-in e+ came at just the right time for bakers a few years ago. A rack oven, which was more energy-economical than any before it, while also delivering better baking products – that was a real milestone in the development of rack ovens.

As a result, they flew off the “shelves”. And buyers were anything but disappointed: The feedback from working bakers was nothing short of euphoric: “The baking quality is even better and the energy consumption is lower.

Our staff only wants to use these baking ovens!” – These and similar comments were heard from bake-houses everywhere.

Our engineers are not in the habit of resting on their laurels. Instead, they see success as an incentive and encouragement to search for other ways to make the products better. Energy efficiency is particularly dear to their hearts. They know that bakers require a lot of energy to operate their systems. If energy savings can be implemented, that helps bakers reduce costs effectively in a key area. That is one of the reasons why we at MIWE strive to make our products more energy-efficient year by year.

Besides energy efficiency, our developers have another priority: The quality of the baked products. Saving energy is a priority, but at MIWE, it never happens at the cost of product quality.

On the contrary: We have always managed to combine greater energy efficiency with a further improvement of the quality of the baked goods.

This was also the case in the latest version of MIWE roll-in e+. Three important innovations result in a 15 % higher energy yield on average (depending on the product range). And at the same time they improve the baking results further. ▷

Until now, MIWE roll-in e^+ was considered the most economical rack oven in the world.

Now it has been surpassed:

MIWE roll-in e^+

The new MIWE roll-in e^+



One new feature is MIWE eco:wing, a self-regulating, purely mechanical (therefore also maintenance and wear-free) seal flap in the flue gas pipeline.

Due to its special shape and placement, it has a positive effect on the flow reaction in the flue gas duct. This significantly improves the heat transfer in the heat exchanger and increases the overall efficiency of

the system compared to the already highly efficient preceding system. In addition to this, MIWE eco:wing also acts a standard flue gas flap: It seals the flue gas channel when the oven is not in use, keeping the precious heat in the system to save energy.

Our designers also went back to the drawing board for the steam device in the MIWE roll-in e+. In the first ver-

**A real milestone cuts
a fine figure any way
you look at it.**



sion of the MIWE roll-in e+ it was already moved to the rear wall of the oven system, directly behind the heat exchanger – which is particularly advantageous from an energy point of view.

This uses the heat from the flue gas to heat the steam device, which results in far lower waste gas temperatures and a higher combustion efficiency of the oven system.

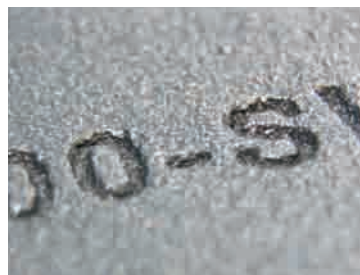
A positive side effect of this is that bakers need significantly less steam and achieve a better, shiny and even crust on all baking trays.

The new roll-in e+ uses a steam device consisting of cast iron elements, which – with the same mass – significantly improves the heat transfer with its rougher and therefore larger surface. On one hand, that saves energy, and on the other hand, leads to a softer, more saturated and moister steam, which improves the quality of the baked products even further at the end of the day.

Optionally (as it is not as important for all bakers), a special heat storage wall will be available for the new MIWE roll-in e+, which in turn has a positive effect on the efficiency of the oven system, by helping to cap burner peak load, as it has the same balancing effect as a heat buffer. This does increase burner operating time (with a reduced final output), but makes the heat exchanger more efficient overall.

However, the heat storage wall also affects the temperature properties of the system with its storage mass. Rack ovens typically have relatively little mass and primarily transfer the heat to the bakery products via air circulation (convection). That gives the oven system a relatively high degree of temperature flexibility.

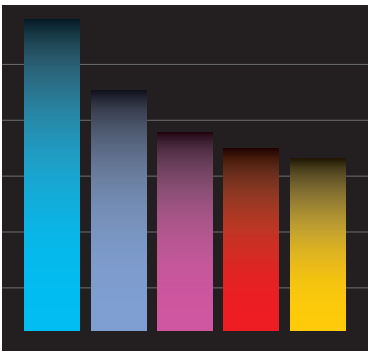
For example, MIWE rack ovens can increase temperatures by roughly 4 °C per minute when fully loaded. However, the temperature in the rack oven drops equally rapidly when goods are inserted or the burner is switched off, as there is no storage system to act as a buffer,



The significantly enlarged micro-surface of the steam device provides an even fuller, softer steam and saves energy too.

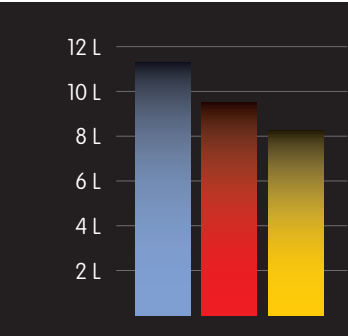
A real-world comparison
of total energy consumption:

- Conventional rack oven (also MIWE roll-in before 2004)
- MIWE roll-in from 2004 and onwards (with MIWE aircontrol)
- MIWE roll-in e+
- New MIWE roll-in e+ from 10/2012 and onwards
- New MIWE roll-in e+ from 10/2012 and onwards (with heat storage wall)



Whether you choose the heat storage wall or not, one thing is sure: MIWE roll-in e+ is and remains one of the most economical and universal rack ovens in the world. ■

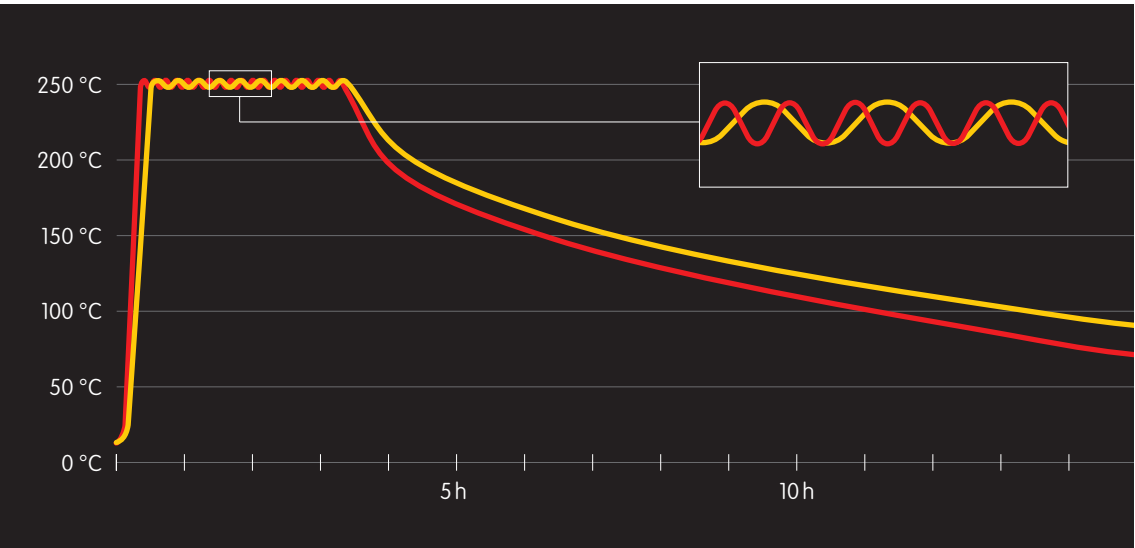
A clear result: Heating
oil consumption for the heating
procedure shown below
speaks for itself.




neither in the body itself nor in a heating medium (e.g. thermal oil). However, this changes with the optional heat storage wall of the new MIWE roll-in e+. The oven takes longer to heat up to the required temperature (once off) than the same oven without a heat storage wall, as the mass of the heat storage wall also has to be heated in addition to the air in the baking chamber.

On the other hand, the greater mass of the oven now holds the temperature longer. Where high temperature flexibility upwards or downwards is neither required or even a disadvantage, the heat storage wall can be used to reduce costs.

The heat storage wall (yellow graph) has the following effect on the temperature profile (heating up / 3h maintaining temperature / cooling down).





+30
~~+15%~~
increased energy yield¹⁾

+30%
more air volume
(in comparison to the MIWE roll-in)
ensures even more
browning and improved crust

>90%
thermal efficiency
(as per DIN 8766):
pure energy efficiency

Δ 50 °C
exhaust gas temperature lower
than baking room temperature
(as per DIN 8766) – less expensive
energy disappears through
the chimney

-15 °C
lower baking temperature
with the same baking
results possible

10 - 25* %**
improved heat
usage with
MIWE eco:wing

+XX
~~+X%~~
more quality
and taste
with an excellent,
perfectly shiny crust

-25*
~~-15 kW~~
lower connected load
of only 70 kW **60*****
with faster baking
readiness and full
steam performance

0%
steam outlet
due to door seals that can
be re-adjusted at any time

MIWE roll-in e+

1) In comparison to conventional rack ovens (also MIWE roll-in before e+)
* with heat storage wall
** without heat storage wall
*** with heat protection wall (for batch after batch baking 65 kW necessary)

MIWE roll-in e+: Probably the thriftiest oven in the world.
Now more than ever!



A world of bak

*At the heart
of every concept:
The right oven*

"In-store baking" is a pretty bland term to describe the colourful world of baking visible to customers.

Today, bakers have many ways to distinguish their in-store baking concepts and thus to create a unique selling point in their markets.

Entirely different baking worlds are possible and permitted, from a nostalgic bakehouse look to an emphasis on the craft aspect, to a cool hipster lounge, from a manufactory with premium quality claims, to self-service bakery stores, from simple range of baked products to varied catering and snack concepts.

As different as the concepts are in detail – one thing is always at the heart of the matter: The right oven. Everything revolves around it. The investment only makes sense if the oven fits the concept perfectly.

To ensure that this is the case, there are many questions to be answered. What quantities of which products are to be baked at which times?

At which MIWE convenience level (see page 26) are the baked goods delivered to the store?

Is the supply of baked products a priority, or are catering concepts also involved (from snacks to full lunches)?

How important is it for you and your customers to demonstrate credibly that you bake authentically using traditional craft methods, and don't just heat up goods baked to completion elsewhere? What qualifications can you or do you want to require of your employees? What is your logistics concept? What impression are you trying to create for your space?



ing competence

Only by considering all of these and many other questions can you create a suitable concept and make a clear decision on the best oven system and technical environment for your application.

The one main thing we at MIWE want to contribute to this, other than a wide range of oven and peripheral systems, which make the various store baking scenarios possible in the first place, is the comprehensive knowledge of all technological, organisational and operational contexts. Based on this, we can give you unbiased advice in accordance with your visions and requirements.

Below, we describe some sample scenarios from the variety of conceivable store baking worlds. Maybe yours is there too? Or perhaps we can give you some

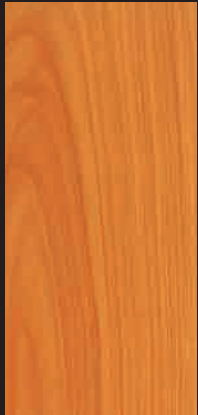
entirely new ideas? Many different combinations are possible.

We help you implement your own personal expertise concept.

Whatever you plan in your store – MIWE does more than make baking easier. It makes you more successful. ▷

What do you bake on?
Perforated or solid tray? Made of aluminium, steel or stainless steel?
With silicone coating or nanocoating?
 Our brief guide to bakery product carriers will answer all your questions. Simply request one from us.





If your store concept involves baking a wide range of goods (possibly at various MIWE convenience levels), and if a wide range is important in addition to on-time availability, the oven needs to be an all-round talent, that can cope with baked goods and all kinds of baking processes, from Danish-style pastries to hard rolls, from proofed dough pieces to un-proofed frozen dough pieces to half-baked frozen products.

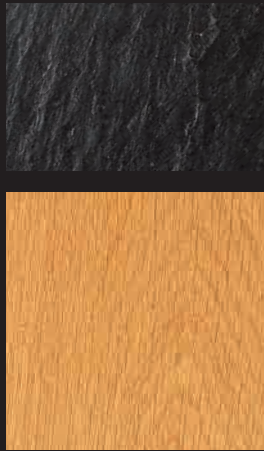
In general, such all-round concepts centre on the electrically heated convection baking oven MIWE aero. There are many reasons why this system is universal and flexible. The size, number of ovens and technical equipment are based entirely on the requirements of day-to-day operations and the technological needs of the products to be baked. For example, certain products require a powerful steam device, while others benefit from special baking programs for frozen items (thaws, then bakes frozen products in a controlled manner). MIWE aero can do all that at the push of a button, as the baking programs regularly required can be stored in its control system and selected conveniently.

With capacities from 4 to 16 trays (two-circuit version) it covers a wide range of quantity requirements. The night start-up function ensures that it is ready for operation on time in the morning, while the power-down mode and the heat-reflecting multiple glazing ensure economic use of precious energy. Besides these features, its extensive view window and the bright halogen lighting present your sight-baking processes perfectly. And with the new water- and energy-saving MIWE cleaning control 3.0, fully automatic cleaning

of the baking chambers has never been easier or safer.

Depending on the convenience level set for the products, the environment may include a proofing chamber or a freezer, or even an automatic proofing machine MIWE GVA, and generally also a space for storing frozen baked products. ▷





competence

If you want to highlight your store's baking expertise even more clearly, and not just demonstrate authentic craft baking, but actually put it into practice, a concept built around the deck baking oven MIWE condo is ideal.

This is the purest reincarnation of the classic traditional oven design, an exact copy of a craft production baking oven on a smaller scale. The wide glass door gives customers a clear view into the brightly lit baking chamber, where bread loaves are baked on a tray or even on stone slab – making it easy to bake real stone-oven bread.

The same excellent baking results as with a large professional deck oven and a wide variety of baked

products and all MIWE convenience levels – MIWE condo makes this possible even on a small standing area with its static baking atmosphere.

In the deck baking oven, heat is largely transferred via radiation and conduction – in particular at the base of the pastry. That gives many products an entirely unique character. Therefore, MIWE condo is particularly suited to products with a distinct craft or rustic character, and products finished with MIWE smart-proof™ for maximum flavour. The baking oven is available with one or multiple ovens, which can each be controlled individually. This ensures ideal conditions if a wider range of different baked products has been baked.



The increased proof of baking expertise does not come without a cost: Not in the baking operations themselves (which can be implemented at the push of a button on the convenient control system); the handling for loading and removal of deck baking ovens is more "authentic" and somewhat more hands-on than with convection baking ovens.

MIWE condo is the perfect partner for snacks of all kinds and catering delicacies – not just for baked products – for more information, see under "gourmand" on page 20. And with its new door, which can be locked into place easily for cleaning purposes, MIWE condo is state of the art when it comes to hygiene.

The MIWE condo's technical peripheral equipment is also determined by the products to be baked and the convenience levels used. From the deep-freeze storage cell to the automatic proofing machine (as an integrated model or a separate cabinet, for example), MIWE provides you with everything you need for a successful in-store baking concept. ▷



mood

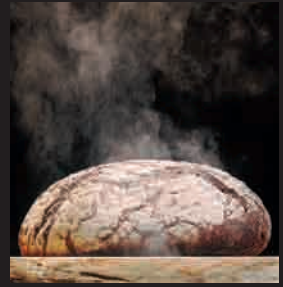
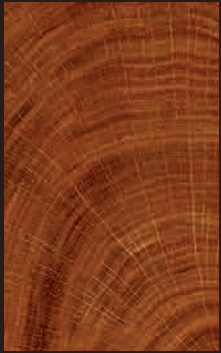
If you want more emotion and style for your display baking system, the Wenz 1919, an eye-catching high-tech oven with a nostalgic look, is ideal as the heart of the entire store concept. With its classic black cast-iron baking oven door, it is a first class attention-grabber wherever it stands. Then, the baking process still looks like most consumers picture it. Just right for a flagship store for the art of baking.

The fact that the baking oven door of the Wenz 1919 is genuine, i.e. actually manufactured with the original tools from original cast moulds of a historic MIWE oven door for an old German wood-fired oven, contributes significantly to the authenticity.

However, behind the door lurks state-of-the-art baking oven engineering, i.e. one (or more) baking chamber(s) of the above mentioned deck baking oven MIWE condo, with all the technical subtleties and the exceptional baking properties which characterise this oven system. The control system can also be located away from the oven, if it would ruin the nostalgic overall impression otherwise.

The origins of the special name "Wenz 1919" is easy to explain: In 1919, Michael Wenz laid the foundations for the global MIWE success story. ▷







freshfood

If the store not only bakes a wide range of baked products, but also finishes them (and possibly other delicacies) as hot snacks, a versatile oven system with special snack expertise is required. Either a combination oven like the MIWE backcombi (convection and deck) or a Fresh Food System such as MIWE cube, customised for your needs from modular components would be ideal as the heart of such a fresh baking concept.

It offers you – with virtually the same floor dimensions, allowing virtually infinite combinations of vertically stacked units – a range of specialised modules, which you can configure individually, expand or modify at any time according to your current snack concept (or the trends and preferences of your clientele).

The baking area can be expanded to meet your current needs precisely. This Fresh Food System includes, in addition to the convection baking oven MIWE cube:air, the deck baking oven MIWE cube:stone, which, as its name indicates, also facilitates baking with a static baking atmosphere on a stone slab (making it easy for you to offer stone-oven bread in your range). There is also the cube:fire module, which also features a stone slab base, and is specially designed for the higher temperature requirements of pizza, tarte flambée etc.

MIWE cube's modular design allows you to give a wide range of pastries and snacks exactly the baking atmosphere where they can reach their full potential – that is another way to demonstrate baking



expertise impressively. As well as snack bakers, the MIWE cube is also popular with bakers who prefer to bake small batches more frequently and always have oven-fresh goods available as a result.

In the background behind the MIWE cube, you will often find a cooling system in the plus range, a freezer storage room or even a proofing MIWE GR. Typically, they are used for proofing or half-baked frozen products. ▷



Ambitious fresh baking is not the preserve of premium bakeries and patisseries, it is often found in the high-quality catering and hotel sectors. As different as the use scenarios and products to be processed may be, where stars, chef's hats and perfect results count, a MIWE condo is usually not far away.

Thanks to its modular construction and the great variety of sizes, it can be perfectly adapted to the respective capacity requirement and the planned products.

Depending on the environment, it is supplemented with a proofing chamber MIWE GR, for pastry shops, patisserie and confectionary products, and also frequently a cream refrigerator MIWE SKS.

In hotel bakeries with high throughputs, they are often joined by a rack oven MIWE roll-in e+.

Put simply: Whatever you bake, MIWE has the right equipment. ▷

gourmand







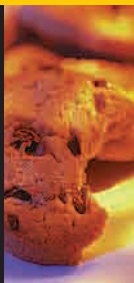
Self-service bakeries, where customers pick out their own products are now common phenomenon in the baking sector. Behind all this is the baking station, where all the goods are baked before they are put on display individually or combined in packages. In such concepts, even, good baking results, quick throughput and optimal work organisation are the priorities. High capacities with increasingly diverse product ranges are necessary, and mixed batches are common.

Usually half-baked goods are used in such scenarios. With a convection oven such as the MIWE econo or, for especially large batches, roll-in operation with the MIWE shop-in, even proofed, frozen products are absolutely no problem.

A MIWE TKS freezer takes care of frozen storage, or for larger quantities, a MIWE TK frozen storage cell can be used.

As we at MIWE view our core expertise as mastery of all air conditioning-controlled process stages of baking, and are accustomed to looking beyond the boundaries of plain technology, you can expect us to provide some key ideas for organising logistics and handling. ▷





to go ...

Crescent rolls, cookies, muffins – just three of the stars among the baked products, which generate additional turnover in coffee shop and other quick service environments. Even if the products are not in the focus of the concept, they increase frequency and average receipts and are the ideal addition to coffee machines in an espresso bar.

“Plug’n-Bake™” concepts are generally required here, which can simply be connected to a standard

socket, and can be operated immediately even by those with little baking experience. The batches are generally smaller, but are baked more often. The statement “Better baking properties lead to better products” holds true here too.

MIWE gusto, one of the most compact fresh-bake ovens on the market, proves that excellent baking properties and a low spatial requirement can be combined to an attractive package. It is mobile, has an independent water tank and can be



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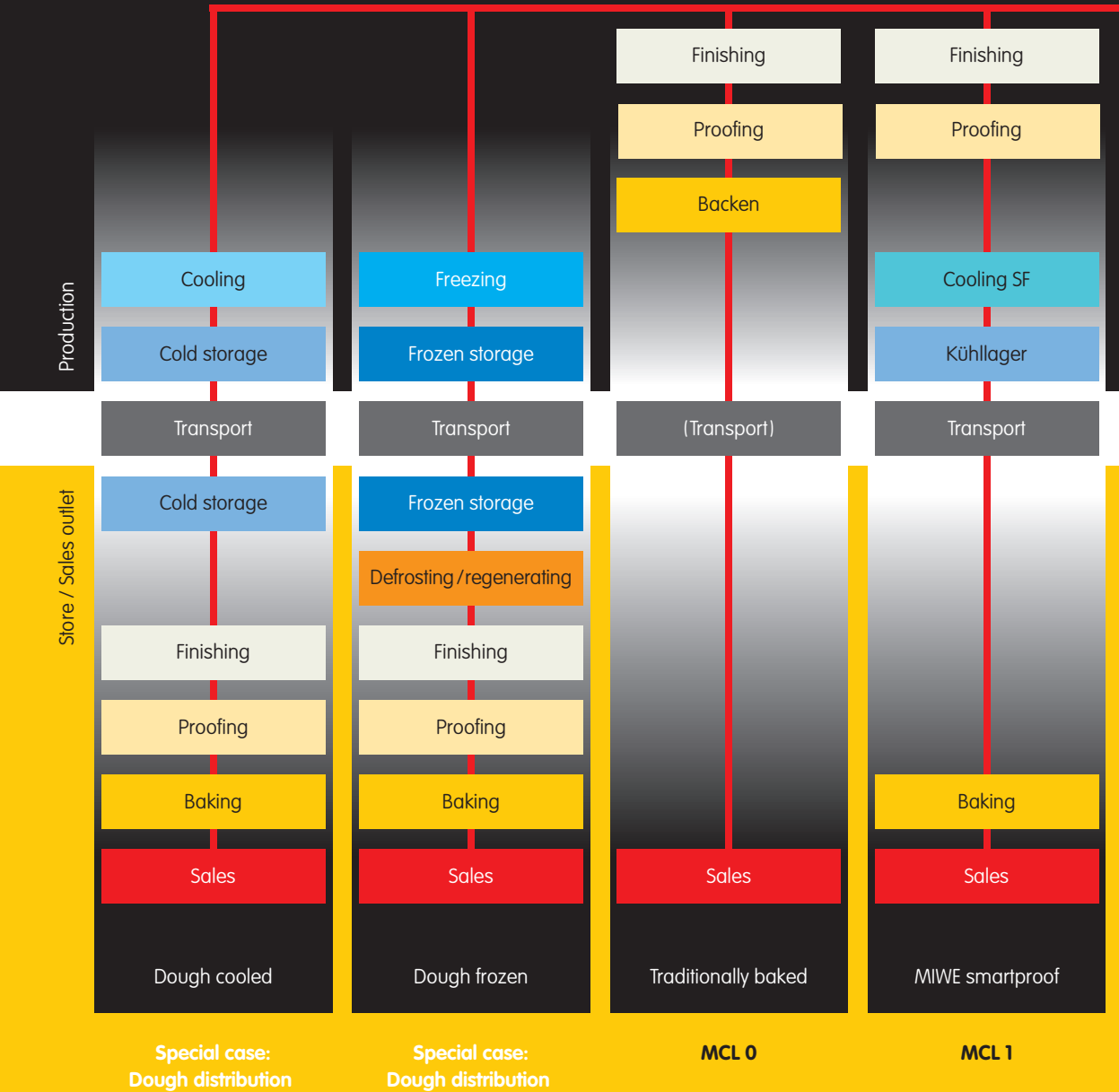
used almost anywhere. Our smallest oven is packed with baking technology – giving you the freedom to bake products from various convenience levels, ready-bake them or simply actively regenerate them, just how you (and your customers) want it. ▷



*The MIWE convenience levels:
The process landscape of modern baking*

Thanks to advances in bakery refrigeration and MIWE's development of "sight and smell" in-store baking, the process landscape and organisational forms of baking (and ultimately the business model of bakers) has become significantly more sophisticated in comparison to the past. The organisational forms current in baking today are, as a rule, extracts or modifications to five elementary basic patterns, which

we, in similar terms used by some raw dough manufacturers, have called the "MIWE convenience levels" (MCL). From a sales perspective, they differ from one another above all in the degree of their "convenience", which is to say the ease with which oven-fresh baked products can be produced in a store. The MIWE convenience levels describe schematically the different stages of the climatatisation pro-



cess in baking (proofing, cooling, freezing, baking) and their type-specific influence on the production and/or store environment. The overview shows the technological relationships in relationship to the whole and makes clear how the processes from both the production and the store worlds have to be aligned together, even though the people active in both worlds are not the same.

The upper half of the table shows the production world and underneath it is the sales world. Distribution (under the heading "transport") creates the necessary connection between both worlds. ■



All-round

Complete manufacturing concepts from a single source: MIWE smart engineering

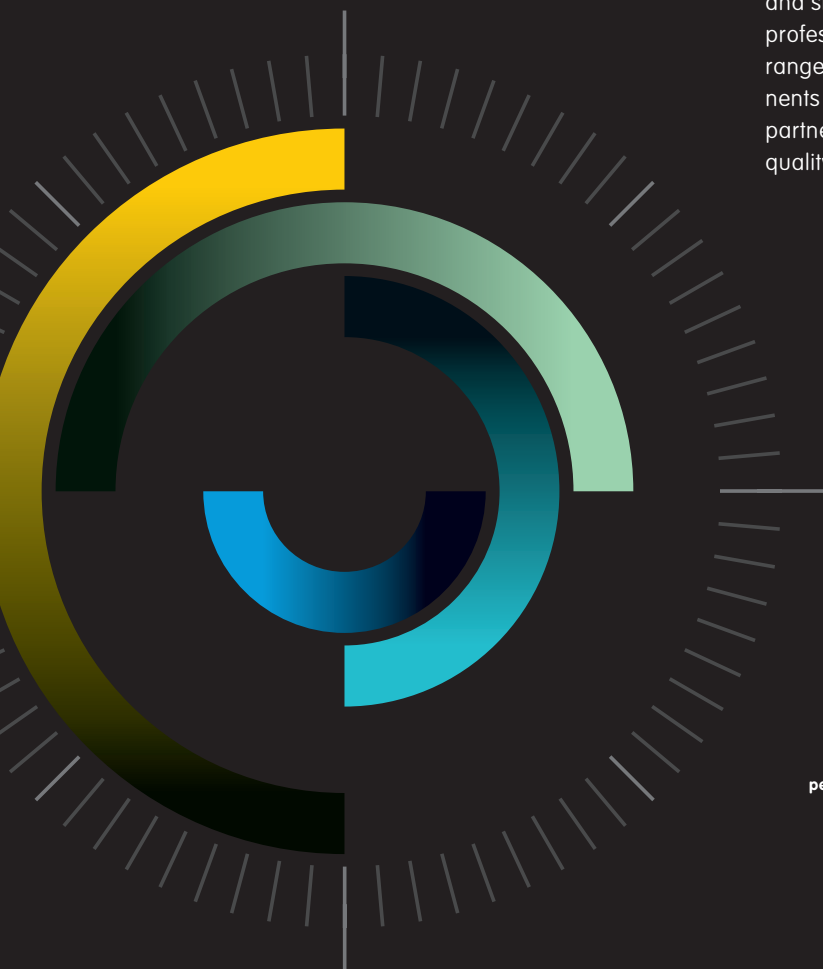
Bakehouse planning has already been about more than just designing the space. Even in the simplest case, planning a bakehouse (or a manufacturing line) involves combining the requirements from dough technology, plant engineering and operational organisation in a clever concept with a view to the planned target product range as well as possible, without neglecting economy and the required product quality in any way.

That applies all the more the higher the throughput, the more ambitious

the degree of automation, the more complex the workflows which must be controlled.

Good production planning therefore always means considering the planned workflow and the parameters to be influenced carefully in their entirety, and on this basis, to develop a manufacturing and organisational concept, which meets the individual needs and requirements optimally. That's already quite an accurate description of the fundamental principle of MIWE smart engineering.

We are both experts on dough and simultaneously engineering professionals. We have a wide range of powerful system components and a network of renowned partners who share our high quality standards.



With MIWE smart engineering, perfect systems can be implemented, even when space is at a premium.

MIWE thermo-rollomat with MIWE athlet.



This is why more and more customers trust us to plan and technically implement entire production processes for them, right up to responsible design and implementation of entire manufacturing lines and bakehouse concepts.

The following pages profile some current examples with completely different tasks and solutions. Here, we describe the principles we pursue and what characterises MIWE as a system provider.

The starting point and benchmark for MIWE smart engineering is to manufacture products which the customer wants in the required quality and quantity. Therefore, every MIWE manufacturing concept grows from a fundamental assessment of the needs, desires and options of our customers. Before we start designing, we ask questions and listen carefully to the answers. And then we contribute our experience and extensive expertise to the remainder of the planning process.

Dough is a delicate material, and dough processing is a complex continuum which can be organised in many ways. Engineering's responsibility is to organise this continuum together with the customers and



strictly in accordance with their requirements, to implement the smoothest possible production workflow with maximum possible utilisation of equipment while optimising energy use and – something that should never be forgotten – to create optimal end products. There is no doubt that powerful technology and perfect mastery of this technology are important for this. However, comprehensive understanding of all process consequences in the overall context of production is even more important. Starting with raw materials, to the recipe, kneading, dough process, reprocessing, proofing control to baking, cooling and freezing, all process steps must be finely tuned and dimensioned to suit one another, if at the end of the process, a really logically, technologically and economically impressive result is to be produced. ▷

From the proofing system to the continuous oven: Automated line for unmoulded loaves and French bread, with an intermediate manual workstation.



The heart of a cutting-edge production facility: Six MIWE ideal M modular deck baking ovens with three ovens each are operated fully automatically by the MIWE athlet XXL.

The MIWE eco:nova features a conveyor belt, proofing trolley loading unit and a heat recovery system. Here, further rack ovens are connected to the MIWE eco:nova.

Therefore, there are obvious advantages when the production concept is not cobbled together from multiple autonomous sources, but is designed in an overall context and a single source from the outset. Our core competence is perfect mastery of all air conditioning-controlled process stages of baking and smooth combination of these

stages – i.e. in the qualitative heart of the entire manufacturing process. Only an expert view of the whole picture (which we like to refer to as a 360 degree view) can frequently result in the key detail improvements in individual processes and workflows and therefore particularly well rounded overall concepts.



Our dough experts, master bakers and dough technologists have a clear idea what has to be done right during kneading or in the proofing process, to ensure that the baking results meet your expectations. From experience, they have a fine grasp of which oven system or which setting in the baking program will consistently get good results from the unique product character created by the recipe and dough process. And, from their many years of experience with many different products, product ranges and projects around the world, they know how individually distinguished processes can be combined to a harmonic overall concept, that an optimal combination of product quality and economy can be reached. MIWE offers you this combination of expertise for your planning process from the outset.

Our developments, engineers and plant constructors in the MIWE engineering team work closely with dough specialists to translate the technical dough requirements into specific technical solutions and a smooth production workflow. They can rely on a wide range of powerful, mutually compatible system components, developed and produced by MIWE, which cover all air conditioning-controlled process stages of baking (proofing, cooling, freezing, baking) and combine them intelligently with one another.

In areas where we cannot create a product with our own resources, we integrate very capable partners who share our absolute concentration on excellent customer products and a trouble-free production flow.

Our master production engineers supervise and organise the entire development, implementation and



Bakery and pastry shop Staub GmbH & Co. KG
Eiselauer Weg 6, 89081 Ulm, Germany

This family-owned company operates over 40 branch outlets. The company has a variety of concepts ('Staibs gute Stube', (Staub's parlour) 'Brot Bar' (bread bar) and 'Daily Bread') for bringing its wide range of products to the point of sale. The company also supplies a range of large-scale customers. Products include a wide variety of bread, hard rolls, pretzels, fine baker's wares, cakes, tarts, snacks and pizza. Other fields of application include breakfast and lunch products.

■ **Project:** Replace an existing production facility with a completely new building. The company wishes to retain its basic concept of daily production of fresh goods. Retain or improve existing product quality while maintaining the company's proven production processes, but with a substantial increase in automation. Harmonise the different product requirements, batch sizes and production process to create a coherent overall process flow, while retaining the desired flexibility. Achieve maximum energy efficiency (for existing conveyor systems as well).

► We will be happy to send you more information on the above bakeries. This information is also available in PDF format at: www.miwe.de/impulse16

commissioning process with professional project management, going beyond engineering clean interfaces. The technology you choose and how you organise your production flow is determined solely based on the requirements of your products and your individual visions. MIWE masters and serves all standard



JSC Luganskmyln
Lutugiskava str. 111,
91020 Lugansk, Ukraine

This company has its own flour mill and supplies businesses such as large bread manufacturers in the Ukraine. The company began producing its own bread several years ago. The production facility operates in two 12-hour shifts (22 – 23 hours), seven days a week.

Product range (at the new facility): bread only, about 80 % of daily production is dedicated to about 8 types (2 bread varieties (long loaves (about 7.5 t per day) and round loaves (about 12.5 t per day), the remaining 20 % is dedicated to five other varieties, primarily wheat bread.

■ The project: Replace an existing production facility (with trolley and rack ovens) with an automated production line. Implement defined output levels while retaining some basic flexibility in terms of batch sizes.

► For more information, see
www.miwe.de/impulse16



technologies at every process stage, giving you maximum freedom to model your production process and create your products exactly the way you want.

Whether you view your future in a more batch-oriented step-by-step production process or in a full line concept with continuous production, whether you prefer thermal oil or flue gas for baking, whether your product will benefit more from the static baking atmosphere of a deck baking oven or the moving heat of a rack oven – MIWE has everything you need. All options are available to you for the proofing process too.

We can implement a trolley-based, rolling principle for you (manual or with an automated transport system). Of course, we can also implement fully-automatic belt, carousel or step proofing systems with a variety of scales and performance classes, and with temperature and moisture curves adapted to your products and processes.

The same applies accordingly for all cooling and freezer technology. Our various loaders and transport systems and their intelligent control systems which permit all conceivable constellations and fulfil every requirement, from highly flexibly manufacturing organisation, to batch-oriented production (generally automated in process groups), to continuous, largely automated production on dedicated high-performance lines.

For more and more bakers, a broader, proven range of expertise from MIWE smart engineering is a key argument when choosing a supplier: MIWE energy.

As the ground-breaking pioneer for greater energy efficiency in bakeries, we put together a perfectly tuned overall package years ago, which effectively helps bakers to save energy costs and also create top quality products in reliable processes. This package has now proven itself in many bakeries of all sizes, both nationally and internationally.



Left: The spacious bakehouse with sophisticated pipework.

Right: One of three refrigeration units with blast freezer, automatic proofing machine and integrated walk-in coolers along with cold storage unit.

Reducing energy consumption from the outset is and remains the most effective of all energy saving measures. That is why our systems, which are highly energy-efficient by design (examples include the rack oven MIWE roll-in e+ or our intelligent combined cooling systems),

are an excellent starting point for a successful energy saving concept. In a second step, our bakery-specific heat recovery and combined heat systems ensure that inevitable process heat does not dissipate unused, but is returned to the energy circuit of the production process (or beyond)

for economic benefit and a sensible solution for energy saving.

We serve both the oven environment (for example with the heat



Product range: bread, hard rolls, (whole wheat and rye), seasoned snacks, cake, French baked goods. Total of about 200 extremely high-quality products. Daily output: 12 t of hard rolls, 28 t of bread and 5–7 t of fine baker's wares. The company supplies about 1,000 branch outlets and sales outlets (franchise concept) in the market for premium products, as well as large sales chains.

Piekarnia Familijna ("family bakery"),
Elzbieta and Witold Kowalczyk, Krosnice, Poland

■ The project: Expand a production facility that has grown in several successive stages (including building extensions). By extending the production facility, the company will shorten distances as well as simplify workflows, while retaining the character and high quality of its baked products. At the same time, energy costs will be dramatically reduced.

► For detailed descriptions of all projects, see www.miwe.de/impulse16



Perfect material flow:
Six MIWE roll-in e* with adjacent automatic proofing machines. These are configured as a pass-through unit. The blast freezer and cold storage unit are located behind them.

recovery system MIWE eco:nova which is available in many different sizes) and all bakery refrigeration applications (e.g. with the high-performance heat exchanger MIWE eco:recover or the auxiliary

components MIWE eco:proof and MIWE eco:defrost).

On the way to their customised heat recovery and combined heating concept, we offer bakers a variety of analyses and aids.



The MIWE energy:scout can be your guide for your first steps in the world of energy saving; see elsewhere in this issue for everything you need to know about this little aid.

What we stated earlier as a generally useful condition for bakehouse concepts applies in particular to MIWE energy: The best results can always be achieved when the concept is based on a thorough all-round consideration of all influences. Therefore, all-round consideration and all-round service (including reliable service in the use phase) are two important key properties of all planning work by MIWE.

At MIWE smart engineering, comprehensive dough and process experience, well-founded engineering expertise, confident project management and the quality standards of a German bakery system builder refined more and more in many years of practical production come together in perfect harmony.

This combination results in customised individual bakery systems, which make optimal throughput, high availability and reliable baked goods quality at economic conditions. In doing so, it ensures that everything in your new bakehouse runs smoothly from the beginning. ■



Bakery Wagner GmbH; Günter und Rudolf Wagner, Hans-Resch-Str. 10, 94099 Ruhstorf/Hütting, Germany

Bakery Wagner was established in 1905 and now has over 20 branch outlets. The company's products have an artisanal focus and are made from locally sourced ingredients. Pretzels are an important part of the company's product range.

■ The project: An extension building was needed because of bottlenecks in production capacity in the current bakehouse. The new building project would also provide an opportunity to optimise material flows, further improve product quality and significantly reduce energy costs (also with respect to existing conveyor systems).

► For more on this project, see: www.miwe.de/impulse16



Here too, a large amount of heat is recovered thanks to the MIWE eco:nova. The engineering room contains a compound refrigeration system with a buffer tank and specially programmed control unit.



And how much

Ask the MIWE energy:scout. It gives you an estimate of how much money you can save with a heat recovery system by MIWE.

Today, many bakers are thinking about more efficient energy use and heat recovery in bakehouses. They all ask themselves (and us) the same questions at first: Is that worthwhile for me? Does the investment pay for itself? How much can I really save?

Precise answers are impossible without a thorough examination (as provided by MIWE energy:check, for example). However, it would help many bakers to be able to estimate at least a ball-park figure for the potential savings in their bakehouse without a great deal of work.



is in it for me?

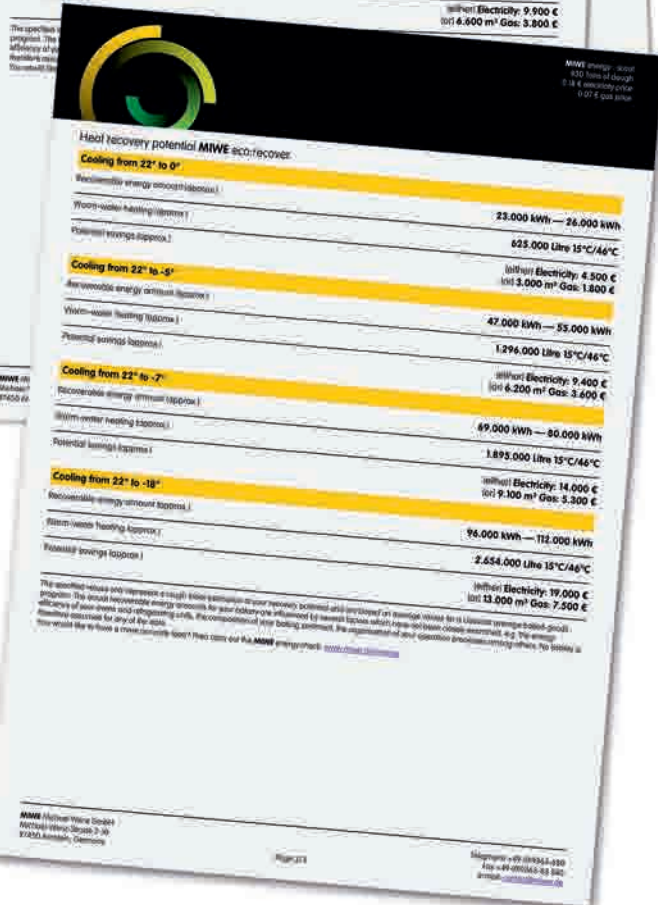
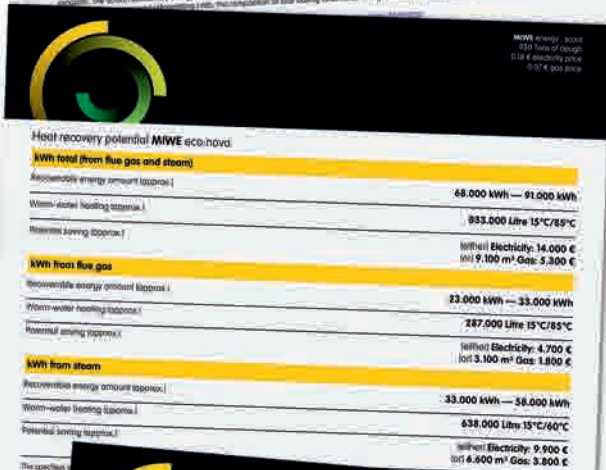
That is exactly why MIWE energy:scout was created. It is available now on the MIWE website at www.miwe.de/scout-en and only requires that you enter three values: The dough quantity processed in a certain period (e.g. a month or year). And the price you pay for electricity and gas per kWh. That's all you have to do. ➤

The screenshot shows the MIWE energy:scout web application. At the top is the MIWE energy logo. Below it are navigation tabs: Home, About Us, Contact Us, and Services. The main content area has three input fields with labels and values:

- Dough weight in t/day: 100
- Your electricity value (€/kWh): 0.28
- Your gas value (€/kWh): 0.10

At the bottom right of the form is a button labeled "Calculate".

It is so easy to get a first idea of the energy savings potential at your company. Simply enter the quantity of dough processed in a year, and the electricity and gas price...



Just click "Calculate" – and MIWE energy:scout uses a sophisticated process, which draws on all of our experience from many practical bakehouse projects, to calculate how much money you can save.

As the results depend on the recovery solution you choose, MIWE energy:scout considers three different scenarios: Heat recovery at the oven – using MIWE eco:nova, which uses both flue gas and steam, and with the flue gas heat exchanger MIWE eco:box. And thirdly and finally, heat recovery for refrigerating units, using a MIWE eco:recover.

For every variant, MIWE energy:scout calculates how much the potential savings would be for your operation. You can toggle between these three savings scenarios by clicking on the corresponding tabs in the header. Click "Request PDF" for a printable PDF file with an evaluation for all three scenarios. Your potential savings black on white.

In refrigerating units, the potential savings depend on the refrigerating performance; as a result, this page also shows four sample results, depending on whether you cool your baked products from an assumed 22 °C to 0 °C, – 5 °C, – 7 °C or – 18 °C. The lower the target temperature, the higher the cooling performance, and the greater the potential savings. In practice, combined heat recovery from ovens and refrigerating units is possible, so that the potential savings from the two areas can even be added.

... and in seconds the MIWE energy:scout calculates how much you could benefit from an investment in better energy efficiency. After a few minutes you will also receive a detailed, several-page PDF for your files.



If you ask what period the calculations results actually apply to, the answer is simple: The period you specified for your dough quantity. If the dough quantity you specified is your monthly throughput, the potential savings displayed are also for one month. If you entered your annual dough throughput, the savings apply for one year.

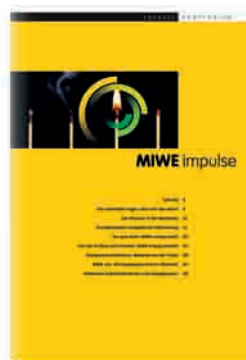
To make the tool as simple and convenient as possible for you, we based the calculation on averages and a classic average product range, which we found again and again in our heat recovery and combined solutions.

The results are therefore approximate, and may be significantly higher or lower in specific individual cases.

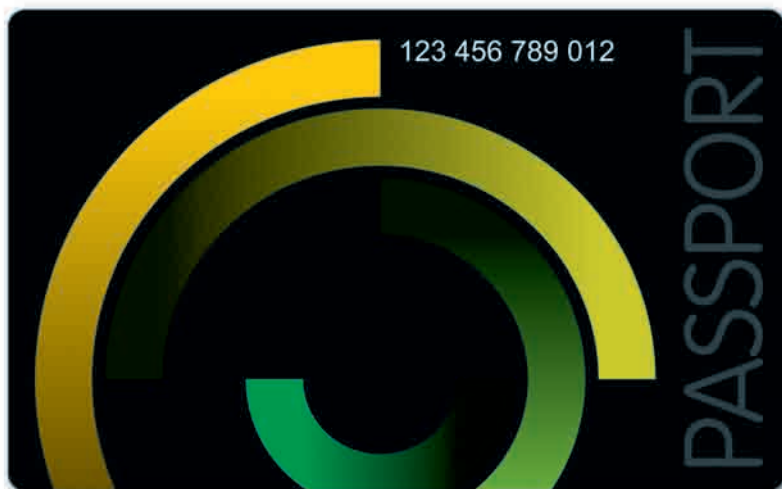
The exact amount you can recover in your bakehouse depends on many details which are not incorporated here: The energy efficiency of your ovens and refrigerating units, for example, the exact composition of your range of baked goods or the organisation of your workflows.

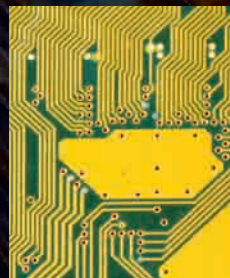
If you need more precise details, we have already prepared the next step for you: Take the MIWE energy:check at www.miwe.de/energy-en

Or speak to your specialist consultant about it. You will see that it is worthwhile. ■



The MIWE passport is your "ticket" to a comprehensive MIWE energy:check – our brief energy reference guide (above right) will provide you with the necessary basic knowledge. You can get both from one of our MIWE technical consultants.





Intelligent service at close quarters

MIWE baking systems have had networking capabilities for some time now. Many customers already avail of an actively managed troubleshooting system.

The new MIWE remote service platform has now been launched. With a host of new features.

And one clear goal – ensuring that your systems function optimally and are available around the clock.

At the same time, it reduces your service costs significantly.

Your first steps with MIWE remote service couldn't be easier:

We connect your systems directly to the MIWE control centre via the new remote service platform.

A specialist monitors your system to ensure that it runs smoothly (around the clock, if need be).

They react immediately if an error occurs, for example, or if a value outside the standard range indicates a malfunction (or operating error). They report it, recommend the right remedy immediately, or rectify the error themselves via remote access.

If the problem cannot be solved with those methods, they will send out the right MIWE service technician for the job – with the right spare parts on board if necessary.

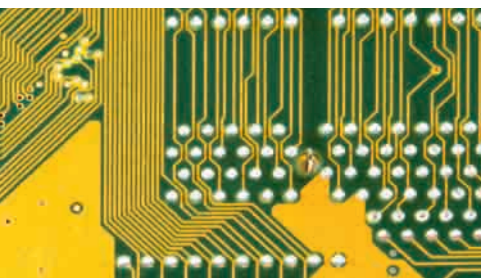
That means that systems monitored by the MIWE remote service to work more efficiently, fail less frequently, and are fully ready for use again faster. You also save costs for technician call-outs, as many tasks can be completed remotely.

The basic package contains monitoring and diagnosis. This is everything you need to get started successfully in remote service.

All systems connected via the MIWE remote service platform are automatically queried at defined intervals. This ensures that the connection is present and secure – if not, we investigate the matter immediately. At the same time, certain data and measurements are transferred and archived for a specific period. One of our remote service experts at the remote service control centre keeps an eye on how well your systems are running at

Even more convenient and reliable:

MIWE remote service launched



all times. If key measurements are outside the expected standards, or if the system reports a fault itself, the service expert takes action immediately.

Regulations you agree in advance with our service team specify precisely how they react to each type of event in your system.

In order to simplify the matter, we offer basic regulations with standard reaction patterns and workflows for common occurrences for our various systems, which you can adapt individually to the requirements in your company.

If a specific event occurs, the service expert first launches the notification routine agreed for this specific case immediately. For example, this can involve notification by e-mail or text message. The persons who receive these notifications are also specified individually (you personally, your head of operations, your service manager, your service partner or other specified persons ...), as is what exactly happens on the subsequent escalation levels if the recipient does not react or if the fault is not rectified and acknowledged within a defined reaction time.

This allows non-standard system reactions to be identified immediately, errors or faults can be rectified rapidly in many cases, extensive downtime can generally be avoided.

The MIWE remote service specialists not only guarantee a rapid and accurate flow of information for MIWE monitoring, they actively contribute all of their expertise and problem-solving abilities via online diagnostics.

They continuously monitor your systems, virtually at close quarters, even if they are actually hundreds of miles away at the control centre. This means that they can diagnose your system comprehensively at all times in the event of specific irregularities, unusual behaviour or error symptoms, and give you precise instructions on how to ensure optimal functionality and availability of your system.

This ranges from simple tips for users to more detailed recommended actions or even a reminder when maintenance would be useful or to replace wearing parts in good time.

If you also book the second MIWE remote service module, MIWE control, and expressly authorise us to access your system remotely (temporarily or permanently), the MIWE service expert can also take direct corrective action and service your system remotely or stabilise the functionality of the system again. They can also involve your employees in the solution, if that is requested: "team view" (also known as "desktop sharing")





allows the remote service expert to see exactly what your on-site staff sees on their screens from the control centre. That allows them to demonstrate and comment (e.g. simultaneously by telephone) on the solution step-by-step.

Overall, MIWE remote service facilitates an entirely new dimension of system efficiency and a significant productivity boost while reducing your costs. I.e. almost exactly what we mean when we say MIWE makes baking easier.

The MIWE remote service platform will be available first for all refrigerating units with MIWE TC control systems and for the fresh food system MIWE cube with MIWE FP control system. All other systems will be integrated successively, so that the MIWE remote service option will be available for all systems with these two control system families

■ MIWE remote service security policy

As MIWE remote service involves your systems and data, we paid close attention to the security aspect during the technical implementation of our remote service platform.

Both access to data and systems as well as transfer and storage are subject to strict security precautions.

Access rights are organised via a strict, hierarchically structured user management, which docu-

ments every access precisely and effectively prevents access by unauthorised persons. Authorised persons are defined precisely in each individual case with you.

Connection to the remote service platform is SSL encrypted, communication itself is protected by the closed architecture of the VPN (Virtual Private Network) used and a special firewall, which makes sure that even clever spies have no way to read the data you sent. To protect your network, we use outgoing connections only.

from the end of 2013. For further information (including options for integrating existing systems), contact your MIWE specialist consultant or contact MIWE service directly at service@miwe.de. ■





Clean!

*How MIWE helps
you improve your
system hygiene*

Where basic hygiene is lacking in a bakehouse or store, often more than just the quality of the baked products and the health of the consumers are at risk. It can endanger the economic future of an entire company. Not to mention the loss of consumer trust, which can be virtually impossible to restore.

That is why perfect hygiene is essential for bakers. At MIWE, we see it as our most important task to make

baking simpler and more successful. Accordingly, hygiene is one of our main priorities. And not just since the much publicised scandals have rocked the industry.

However, we firmly believe that it makes no business sense (and definitely isn't economical) when cleanliness and hygiene in bakeries involve labour-intensive cleaning processes. They should be part of the design of the machine or system as a fundamental concept.



Not only because increasingly mandatory requirements (e.g. the Hazard Analysis and Critical Control Point [HACCP] concept) require exactly that. But also because it is in the basic survival interests of our customers.

In terms of design, our engineers have also had plenty of good ideas to prevent cleaning from becoming

a chore for you. Take for example the new door of the MIWE condo. It can now be locked in a cleaning position simple; that allows you to clean the inside of the door conveniently without requiring you to become a contortionist (and without a disassembly tool).

And what about the new MIWE proofing cabinets. ▷



Environmentally friendly. Fast. Thorough. Not to mention extremely convenient: the new MIWE cleaning control

Unlike ovens, where the high temperatures already ensure a certain basic level of hygiene, proofing units, with their generally hot and moist climate, offer ideal growth conditions for all kinds of unwelcome organisms. That is why they need special attention, not only in use, but also in development.

As a result, the MIWE engineers revised many aspects of the new proofing cabinet, giving it a deep-drawn stainless steel inner shell,

which, of is inherently far superior to the standard plastic shells. Fewer joints, fewer screws, fewer edges – all of these features contribute to far better hygiene properties of the new proofing cabinet overall, and make it clearly easier to clean.

Last, take the new cleaning control, which will be available for MIWE aero. This fully automatic cleaning system uses a food-safe, mild cleaning agent, which is totally safe to use (this system prevents skin contact anyway), but achieves the thorough cleaning effect required in a baking station like the MIWE aero – with significantly shorter cleaning times overall.

Our engineers have also implemented an important aspect of the environmental concept: The only packaging waste is the recyclable filling bottle for the cleaning agents. The new cleaning system is also superior to older versions when it comes to water and energy use. An automatic refill indicator, an autostart function and simple refilling via the front panel also help making operation easier.

All in all, it's a sustainable, well-designed and clean system! ■



■ *Fair dates*

- ▶ **iba**
Munich / Germany
16.09.–21.09.2012
- ▶ **Bäckerei Technologie
Tagung**
Detmold / Germany
13.–15.11.2012
- ▶ **Broodway**
Kortrijk / Belgium
30.09.–03.10.2012
- ▶ **Alles für den Gast**
Salzburg / Austria
10.–14.11.2012
- ▶ **Polagra**
Posen / Poland
07.–10.10.2012

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