



# MIWE impulse

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„Vorsprung durch Technik“

My exceptional use of a slogan of a leading car manufacturer does not result from the fact that we at MIWE are especially devoted to this company, or its products. It is rather because in this short phrase, I find an aspect to which we also largely owe our rank in the markets truly captured in words: It is the continuous, customer-oriented advanced development of our units, systems, and processes, which makes it easier for bakers to be successful in a changing world time and again. Therefore it is also no coincidence that MIWE is regarded as a reliable technology and innovation leader in the market, according to various surveys.

You can find abundant proof for how innovations from our house have changed the world of bakers (and continue to do so) in the history of MIWE – and of course also in this issue of the MIWE impulse. For example, I recommend the article about the control system MIWE TC, which will bring an entirely new operating convenience into bakeries of totally different characters.

Or the documentation of a four-week (!) field comparison test at one of our customers' bakeries, in which the MIWE roll-in showed that it consumes almost 20% less energy than the oven of a well-known competitor for the same product program, not least due to the circulating air system MIWE aircontrol.

Such advancement through technology does not evolve overnight, and out of nothing. It is the result of profound engineering art, attentive customer-orientation, and continuous effort.

The short flashback on 40 years of success of the MIWE roll-in illustrates this impressively.

For a manufacturer like MIWE, future mainly has one key aspect: The increasing internationalization of the markets. This also becomes apparent in this issue of the MIWE impulse. The fair calendar is extensive and international like never before. Also, this issue is the first to appear in German, Russian, and English at the same time.

Beside all concentration on technology, we are and remain conscious that baking always also has an historico-cultural dimension next to the technical one, which also has great importance for many bakers. Otherwise there would hardly be an explanation for the enthusiasm with which baker Klaus Hench accumulated his collection of historic coins and medals dealing with bread.

Customers say this is exactly what characterizes MIWE next to the technical advantage: The enthusiasm with which we dedicate ourselves to the mutual goal.

I hope you enjoy reading our issue.

Sabine Michaela Wenz



# It just keeps on baking...



It was specially decked out for its day of glory. The stainless steel fronts shine and gleam like new. Even a birthday cake was prepared in the bakery Göckel in Heinrichsthal / Germany: A large yeast braid proudly stating „40“. Because to the day 40 years ago the oven was started up in the bakery located in the region Hochspessart: An oil-fired MIWE ideal with 4 decks.

„And since then we have been baking with it ceaselessly, with excellent results right from the first day“, says senior owner Ludwig Göckel with pride.

The „greenhorn“ standing right next to it – a MIWE roll-in – can not yet match such life-time achievement. Maybe that is why it must diligently bake whole grain bread, while all else in the bakery today is focused on the jubilarian, who came to Heinrichsthal in 1967, when the Göckel family decided to prepare the business they took over in 1946 for the future with entirely new baking equipment.

In the beginning, Göckel remembers, it had already been an immense, very convenient change from the coal-heated steam baking oven they used to have, where every loaf of bread needed to be loaded and unloaded with a peel loader, to the modern, oil-heated unit with 4 hearths and its 8 m<sup>2</sup> baking area, and the comfortable loading with a setter unit (like an affirmation, the peel loader still stands in the corner of the bakery as museum memorabilia). At first, the father was rather skeptical, as with everything new and unfamiliar, but on the evidence of the excellent baking results and the rationalization effects in the bakery, he soon was transformed from a skeptic to an enthusiast, reports Göckel, who has meanwhile handed the business over to his son Carlo, but of course can still be found in the bakery when he is needed there, even with his 67 years of age.

A baking oven not only has to bake well, but also have a long life span, was the argument of the older Göckel back then, and did not make the decision for the right brand an easy one for himself.

That he made exactly the right decision with the MIWE ideal is more than apparent now, remarks Göckel with satisfaction.

His son Carlo is of the same opinion – and momentarily does not see any reason to exchange the oven for a new one.

MIWE salesman Günter Hartmann, who came by for a visit specially for the baking oven anniversary, fully understands this. „Why should one, by all means, replace a baking oven that successfully performs its work day after day with a new one? It is not the style of the house MIWE to convince bakers of new acquisitions at all costs that they do not even have urgent need for.“

Hartmann, who will retire end of the year, can still vividly remember how he advised the senior owner 40 years ago. „Back then not even all streets were paved in Heinrichsthal. But here at Göckel stood one of the most modern baking units far and wide.“ The investment in the future did, one can say without any exaggeration, pay off. ■

Senior owner Ludwig Göckel, MIWE sales professional Günter Hartmann, and owner Carlo Göckel in front of the „jubilarian“, who by no means wants to retire.



*In service since 40 years: The MIWE ideal of the bakery Göckel in Heinrichsthal*



# Bread and famine on coins

**What does an enthusiastic baker actually do after his days work is done? Watch TV? Relax? Have a beer?**

**No:** He delves into historic evidence about the cultural history of baking. He reads one of his over thousand specialist books, sorts his coin collection, enjoys his artwork, corresponds with specialists all over the world. And gives us an interview, if need be.

## *A collector and his treasures*

At least when you are talking about the baking master Klaus Hench from Miltenberg. Meanwhile, Hench is retired, and his son Thomas has had free reign in the bakery for some time now, but the enthusiasm for his hobby, the collection of cultural evidence about the art of baking, reaches all the way back to his early years. The great collection he has accumulated over the years could also not be explained otherwise.

So there he sits in his self-made, far-reaching archive, and shows us his treasures, not without pride. He would like to show us „Bread and famine on coins“, he had told us on the telephone. Everything is perfectly prepared. The intarsia-decorated closet with the many drawers is ready, the self-composed catalogue lies open, specialist literature in reach. And Klaus Hench narrates.

In such a stirringly dedicated manner that we fully forget the thermos jug of coffee that his wife Karin had specifically prepared for us. Klaus Hench has collected more than 250 pieces, coins, medals, stamps, Notgeld (German for emergency money), and bread and food ration cards over the years, neatly stored and catalogued.

He has purchased them in auctions, in recent times also on the Internet; some pieces are presents from friends and relatives that know of his passion. ▶

**A place to relax:** Klaus Hench in his treasure chamber.  
**Bottom:** Travel bread coupon of the German Reich, approx. 1918.



His principle of selection: All objects must be associated with bread or bread grain – or with the lack of both, with hunger and need. Especially grain is often depicted on means of payment, an echo of the exchange character of money, which was originally used as practical replacement of a concrete kind, to which it could be exchanged again anytime. As purely creative reflex, grain ears on coins have survived on our coins until this day: On the German Mark Pfennigs they are elegantly twined around the value number.



Already the Stater (400 B.C.) shows a barley ear on the reverse, a sign for the exchange character of money that was preserved all the way into the era of the German Mark.



Much more often however, famine is the topic for coin masters and printers – which allows the conclusion that Old Mother Hubbard's cupboard was quite common in historic times.

The oldest piece in Klaus Henchs collection is a coin from the time around 400 B.C. It is from Metapontion in Lucania (more commonly known today under the name Basilicata, at the gulf of Tarent), which had been a Greek colony since the 7th Century B.C., and was integrated into the Roman Empire without much fuss later on. On the obverse – as coin collectors call the „front side“ of a coin – it carries an image of Demeter, the Goddess of fertility and bread grain with a braid wrapped around her head. The reverse – meaning the backside – carries a barley ear, recognizable by the long beard, and the minted word „META“.

Klaus Hench is especially keen on the historical context that coins always have beyond their aesthetic qualities and their pure collectors value. He knows to bring them in line with historic events, and knows the stories behind history. This is also why he is glad he was able to acquire a bronze coin from Judea, a so-called „Prutah“ from the year 10 A.C. – the thought that the coin possibly even was in circulation during the lifetime of Jesus is simply alluring. Circled by a pearl frame on the reverse, the coin shows a barley ear and the in-



scription KAICAROC (meaning „from Caesar“), the obverse shows a date palm with eight branches and two date clusters. The year is also embossed, and allows the dating of the coin to the time of reign of the procurator Marcus Ambibulus, who was Roman prefect in Judea from 9 to 12 A.C., and therefore one of the predecessors in office of bible-known Pontius Pilatus – by the way, under Emperor Augustus, who allegedly was one of the first coin collectors himself.

While this one, and many more coins of the collection of baker Hench actually served as means of payment, other pieces were intended for very special purposes. On the one hand, there is „Almosengeld“, German for „charity money“, (also called Hungermünzen (famine coins), Brotmünzen (bread coins), Brotpfennige (bread pfennigs) or Almosenmarken (charity coupons). These coins were given to people in need in times of limited grain, price increases, and famine by cities, foundations, princes, or church institutions, so that they could buy bread for a lesser price, or even receive it free of charge.

He who thinks these are events from long forgotten days – at least in Germany – is quickly convinced of the opposite with a look at Henchs' collection: The most recent examples in Klaus Henchs' collection are the Notpfennigs from Lüdenschaid from the years 1947 and 1948; Henchs' oldest piece is an „Almosenmarke“ from Brügge dated 1750.



The work of the Kornverein (Corn association) of Elberfeld is especially well-documented in Henchs' collection, an organization founded by the bustling merchant and communal politician Johann Jakob Aders (1772 – 1836) in his home town. „Brottaler“ were first minted in 1816 and then again in 1847 in Elberfeld (a part of Wuppertal today).

Hench has studied the background in literature meticulously: With an average weekly salary of 3 thaler (1 thaler was 360 Pfennigs) it was difficult enough for a worker to feed his family under normal conditions. When potatoes became almost unaffordable in 1846, and the bread price had increased to 90 Pfennigs, the decision was made in Elberfeld to subsidize the bread price. Citizens in the lowest tax category and those not subject to tax at all (mostly unemployed) were given bread rationing coupons, with which these people in need were able to purchase bread 30 Pfennigs cheaper.

The price for a single loaf of bread continued to increase to 106 Pfennigs in the course of the famine – a tenth of the weekly wage!

Even with a bread rationing coupon the price for one loaf of bread was 76 Pfennigs. In total, more than 16.000 Elberfeld citizens, amounting to almost one third of the population back then, received this support. ▷

Elberfelder Brottaler from the year 1847. "Purchase on time, so you will have in times of need", is written beneath on the variant from the year 1817.



Examples for Almosengeld (from left to right): Lüdenschneider Notpfennig (emergency Pfennig from Lüdenschaid / 1947), Almosenmarke Brügge (charity coupon Brügge / 1750), Kölner Brotpfennig (bread Pfennig from Cologne / 1789) and Armenhausgeld Wien (poverty house money Vienna / 1773).



At the time of the famine in Saxony this coin (1772) shows the exact value of food. The circumferential text speaks volumes: „Große Theuerung – Schlechte Nahrung“ (Large price increase – bad food).

The Josephs-Jeton is also from the year 1772. The front side reads: „Die Theuerung im Land. Macht Joseph bekannt“ (The price increase in town makes Joseph known).



Medals were also minted, next to the Brotmarken. Medals are coin-like objects that contrary to coins or Almosengeld do not have any exchangeable purpose, but are intended only as memorabilia of certain events – just as until this day, for example on occasion of the first landing of the moon, or the soccer world cup, commemorative coins are minted without monetary value. Hensch's medals concern, how else could it be, primarily famines, but even more the joyous deliverance from the same.

Famines of disastrous extent repeatedly came over Europe. Some of the worst (these are accordingly well-documented in Hensch's collection with bread and famine medals) were the famines from the first half of the 17th Century (a direct consequence of the catastrophic 30-year-war), the famine in Saxony and Lausitz in the years 1771/72 (caused by floods and crop failures due to cold, wet weather), the famine 1816/17 that held all of Europe in its iron grip, and the famine in the years 1845 to 1849, when almost the entire potato harvest was subject to potato blight, and famine took the lives of millions of people alone in Ireland, and caused hundreds of thousands to board emigrant ships to America.

How life must be under such poor conditions is probably best described by somebody who experienced it, and lost his eyesight for three years as a child due to malnutrition: Karl May, the adventure author, was born as the fifth child of fourteen to a poor weaver family in 1842 in Ernstthal, close to Chemnitz. He remembers: „Those were hard times back then, especially for the

poor inhabitants of that region where my hometown lies. The wealthy society of today can hardly imagine how miserably the people hungered through life at that time at the end of the forties. We lacked almost everything necessary for even the most basic nutrition. We used to beg for the potato peels from our neighbor, the landlord of the restaurant »Zur Stadt Glauchau« at lunchtime, in order to use the few chunks that may have been overlooked for a thin soup. We went to the »red Mill« and were given a few handfuls of dust and spelt waste to try and make something remotely edible out of it. (My life and my efforts, Freiburg 1910, page 39).

That the deliverance from such poverty by a satiable harvest was documented on medals as a significant event is not surprising. The minter from the city of Fürth, Johann Christian Reich (1730–1840) especially made his mark in this, according to the collection of Hensch, as he was promoted first to Prussian, then to Bavarian household medallist. He created the Fortuna and the Josephs-Jeton, and an entire series of medals about the year of famine 1772 in Saxony that among other reasons are so valuable to historians because they record the price development for bread so meticulously.

During the first quarter year („da war die theuerung so grosz, das viele 10000 für hunger verschmachteteten“, meaning „the price increase during this time was so great that many 10000 wilted of hunger“) the price for one loaf of bread was 12 Kreuzer. Only after the successful harvest towards the end of the year it dropped to 3 Kreuzer.



The historico-cultural most important piece in Hensch's collection is a Stettner Schraubtaler (screw medal), named after the Nuremberg medallist Johann Thomas Stettner (1785–1872), who created this medal made of two parts closable like a flat can. Unusually strong rain showers and low temperatures had nearly destroyed the harvest in 1816. A famine during the winter of 1816/17 broke out all over southern Germany.

Content of the Dosen-Steckmedaille (can medal): 8 copperplate engravings that each carry opposite texts (see large image).



The wide-spread Schraubtaler by Stettner recount the story of the famine on eight paper slips contained in the medal, which describe the circumstances in picture on the one side, and in words on the other: „The devastation caused by the hail storm in 1816 were dreadful.

Thousands stood wailing before the crushed seeds and in front of the broken trees“. The inside of the lids carry price tables for the years 1771 and 1817. >

Price tables that compare 1771 and 1817 are contained on the inside of the lid of the Stettner Schraubtaler.





Outside view of the Stettner Schraubtaler (1816 / 1817).

Famine and deliverance, these are the two sides of this medal, in the truest sense of word. On the obverse hunger dominates the picture: A family of four, desperate and in tears, in front of a barren tree and empty corn-stalks with the text: „Gros ist die Noth – o Herr erbarme dich“ (The need is great - O Father please have mercy). On the backside then a landscape with swaying corn fields, overhead an angel carrying ears of corn. And the urgent admonition: „Erkenne, das ein Gott ist“ (Recognize that there is a God).

Bread grain is a trade good for which the price generally is set by a free play of supply and demand. Already long before the introduction of globally acting grain stock markets, clever speculators have recognized that one can influence this free play in a profitable manner by artificially creating shortage by keeping back stocks, in order to sell them at an even higher price later on, after the prices have increased due to the general lack.

The speculators do not care that in the meantime, people are starving and suffering hunger. Already in historic times one knew about and condemned this form of withholding corn: „He that withholds

corn, the people shall curse him but blessing shall be upon the head of him that sells it“, is written in Proverbs (11, 26).

An entire coin category owes its existence to the anger about these speculators, even more the gloating over the fact that their plan did not even work out: The so-called Kornjuden-Taler (corn Jew thaler), of which Hench owns a few beautiful specimens from the 17th and 18th Century. They often show a figure walking towards the door to hell with overflowing sacks of corn on his back, while at the same time a devil is slitting the sack open, making the corn falls uselessly to the ground. The backside carries the proverb.

The „Kornjude“ (Corn Jew), which is mentioned for the first time in Johann Fischarts „Geschichtsklitterung“ at the end of the 16th Century, and stands next to other designations like Kornmauscher, Kornschinder and Kornweibel, is the personified speculator, and apparently a nuisance of the time, because he not only appears on coins, but is also topic of the so-called „Wucherpredigten“ (withholding sermons) wide-spread at the time, of which for example Georg Zeemann

(1580 – 1638) had twenty different ones printed in Kempten alone in the year 1620 with the title „Geitz vnd Wucher Armee ... das ist zwanzig Thewrungs vnd Wucher Predigen“ (Avarice and withholding army... these are twenty sermons about price increase and withholding).

The Kornjuden medals served – with blessing of the church – the glee of those that wanted to see the Jews as originator of all bad things in a cheap manner. That the grain withholders surely were not all, maybe not even mainly Jews, did not seem to bother anybody. It was good anti-Semitic tradition to blame Jews as alleged originator of all bad things – with the disastrous, gruesome consequences that we know of today.

Klaus Hench could continue to tell stories for hours. From Missionstalern (mission thalers) and Zunftmarken (guild coins), about the Salvator-Bierzähler (beer counter), with which one can set the numbers from 1 to 12 on a special disc, and therefore keep track of the owed drinks even in advanced alcoholized condition, about the commemorative coins of the baker guilds and the Bäckersänger (baker singers), about Notgeld that many communes handed out during the currency collapse in 1921

to 1923, and on which in spite of all poverty a defiant humor is documented – for example, the Notgeld of the city Bad Wörishofen romances „Für diesen papiernen Fetzen, kriegst Du noch nicht nen Bretzen“ (You do not even get a brezel, for this scrap of paper) or when the Notgeld for the occasion of the baker singer association festival 1921 in Lübeck writes: „Wir Bäcker sind doch edle Knaben, was wir uns von den Händen schaben, dran müssen Arm und Reich sich laben“ (We bakers are such noble folk, what we scratch off of our hands is to be comfort for the poor and rich), or, on another banknote: „Das Bäckerleben hat Gott gegeben. Das Backen bei Nacht, hat der Teufel erdacht.“ (God gave the bakers' life. The devil thought up the baking at night).

But it has gotten late. We take a quick glance at the collection of fine Meißener porcelain bakers that Klaus Hench keeps in a glass showcase. Then we say goodbye.

Not without having our pockets filled with a few original „Weinplätzchen“ from Hench. And with the credo of the baker Hench in our ear: „Collecting is like baking. You have to have skills. And put your heart into it. Then you will never have to worry about your future.“ ■



Kornjuden medals – here a specimen from the year 1694 – served the prejudice towards Jews as cause of all evil in a cheap manner.

Notgeld in times of the currency collapse 1921 to 1923.

We would like to thank Klaus Hench, who opened his treasure chamber to us, and shared his knowledge with us.



**As reader of the the MIWE impulse, you know that we have made it our goal to facilitate life for bakers. As MIWE user you surely also know that we are not only focused on the performance and the convenient everyday use of our baking ovens and units. But also always on the baker, who uses these units day after day.**

Therefore we have paid very special attention to the control system, the „interface“ between the user and his MIWE unit right from the start. Because even if a control system ultimately only executes what the user specifies, it is still of significant importance for practice how conveniently and intelligently it does this. We remember: Some owners of state-of-the-art video recorders are said to have fallen into despair because they simply were not able to program a simple recording.

Luckily bakers have never had to have such experiences with MIWE control systems. No matter whether they chose the simplicity of the fixed program control system MIWE FP, or the convenience of the computer control system MIWE CS: In both cases they achieved (and still do) the desired baking result easily and comfortably.

Both control systems were well in advance in terms of technology upon their market entrance, and still are among the best of available bakery technology today. But as you know, better is the enemy of good. Time does not stand still. Computer technology still continues to develop at quick pace.

Reason enough for us here at MIWE to provide you with a new tool that integrates the advantages of the

most recent developments, and will lead to further facilitation of daily processes: The new control system MIWE TC is here, highly efficient, versatile, and convenient like no other MIWE control system before. Primarily, versatility in a control system means that it meets the totally different requirements of different user groups.

Not everybody operating a baking oven is also automatically a baking professional. This is why the new MIWE TC has two variants of operating surfaces panels that can be switched with the touch of a button: The simple Easy-Mode, reduced to the basics, and the Pro-Mode for the advanced user.

The Easy-Mode is focused on the simplified selection, the start and control of baking programs.

The right program is selected by a (randomly saved) product image and a single touch of a key; the selected product remains visible on the screen throughout the entire baking process along with the extra



We will gladly send you a selection of basic programs for the MIWE TC, as well as for the MIWE aircontrol, if you checkmark these items on your feedback form. A direct download under [www.miwe.de/roll-in](http://www.miwe.de/roll-in) is even faster.

**The Easy-Mode: The most important factors at a glance.**

# Touch IT!

*The new benchmark for baking oven control systems*





large display of the set/current temperatures and the also clearly displayed remaining baking time, so that you are able to see what is currently being baked, and how long the baking process still takes, even from a distance.

The Pro-Mode is intended for the experienced baker who wishes to administer the baking programs, or wants to review all settings in detail and modify them by hand, if necessary. Up to 250 baking programs with a maximum of 8 baking phases each can be saved, edited, and selected in the MIWE TC.

Thanks to a clear and structured screen display without unnecessary menu branches all this is done quickly and easily right from the first try.

In the Pro-Mode the baking process is also recorded in graphic form on the screen, plus not only the target / performance temperature curve, but also the steam input, for example. This way the entire baking process can be viewed at just one glance. The Pro-Mode is password protected and reserved for users that possess the corresponding authorizations within the user administration of the MIWE TC, so that unauthorized persons cannot even gain access to the Pro-Mode. The manual mode, in which every single baking parameter can be set individually, is intended specially for baking trials.

Further improved operating comfort was the second goal of our engineers in the development of the MIWE TC. With its large Touchscreen-color display (therefore also the name TC for „Touch Control“) and a start-stop-key sensitive to touch

already from a distance it offers simple intuitive control by a fingertip. That the absolutely plane, moisture-protected control element is advantageous for hygiene in bakery surroundings is self-evident.

Networking as a topic of the future is long gone for the MIWE TC – as already for its predecessors: Two convenient USB-ports (one of them easily accessible from the front), an Ethernet-interface and (optional) WLAN or bluetooth adapters provide comfortable connections to the outside world almost at will, whether you wish to handle or enter baking programs, review and record operating statuses, or conduct remote maintenance, respectively have it done.

The MIWE TC also surpasses other boundaries: As a fully graphic control system, it includes various foreign languages, and with them also foreign fonts (for example Cyrillic), so that it speaks an understandable language for every user even there where no obvious symbols make an explanatory text superfluous. Talking about graphics: It goes without saying that the MIWE TC can also display your company logo or another optional advertising motif on the screen, and thus emphasize the uniqueness of your baking goods most pleasantly.

Of course the new control element is also a perfect master of the specialties from the MIWE house: The operation of the MIWE aircontrol for example, the automatic capacity regulation, MIWE gradient temperature baking for partially filled baking ovens, and the automated baking of frozen small products.

You can read more about these specialties in own articles in this MIWE impulse.

One thing remains to be said: The new MIWE TC will be available first in the rack oven MIWE roll-in and in the baking station MIWE aero.

In the future, it will be continuously replacing the previous computer control system MIWE CS in all other baking ovens, as well as in the bakery refrigeration units of our house. ■



**The Pro-Mode:**  
Efficient and neatly arranged, it displays all baking parameters in graphic or alphanumeric form. The black bars stand for the individual baking phases with the respective target value specification; the yellow graph shows how the oven changes the target values into actual temperatures in real time. Steam is displayed blue in real time, during steam input the water quantity is also displayed exactly in deciliters.

Never were modifications or the creation of baking programs so easy, so structured, and convenient as they are with the new MIWE TC.



Images from top to bottom: Start-up screen, programming of night start-up times, „screen saver display“ with programmed night start-up.

# The dosage is decisive



*Optimal baking climate with low energy consumption: MIWE aircontrol*

**Already old Paracelsus knew: The right dosage is decisive. What is right for medicine also goes for the circulated air quantity in convection baking ovens. Perfect results are only possible if the quantity of circulated air is adapted adequately to the bakery product, also saving energy costs on the side.**

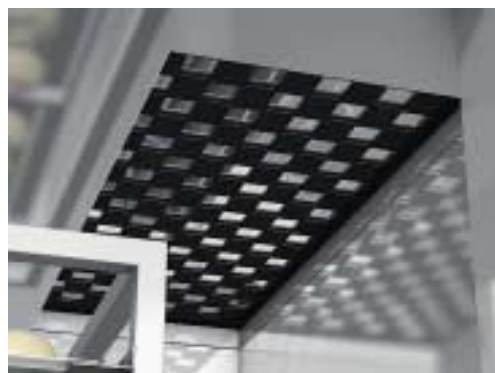
This is the reason why the MIWE air-control is so popular among bakers. Because it precisely controls how much air is circulated in the baking chamber of a MIWE roll-in so easily, and therefore is hardly prone to faults.

On the one hand, this is good for the quality of the baking products. Every product has different, fully unique characteristics in heat conduction, and totally different volume-bulk-ratios, meaning also different requirement specifications for the temperature and air quantity flow during the baking process. For example, it is a fact that heat is supposed to be „softer“, the higher the fat and protein content of the recipe is. With the MIWE aircontrol, the baker is able to react precisely to such different requirements and

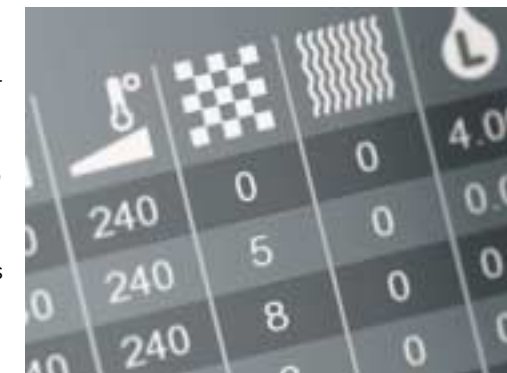
therefore create the ideal baking climate for all his baked products – with a touch of a button, once the according values are saved in the baking oven control system. Especially when handling fine yeast dough, biscuit pastes, or tin products, the quality of the end product can be influenced very positively with a differentiated air quantity profile.

The MIWE aircontrol can also be utilized effectively for energy saving. Field tests in daily operation of bakeries, about which we will report later on in this issue, have shown that using a MIWE roll-in can save you up to 20% energy in comparison with a competitive baking oven of the same size! The MIWE roll-in owes this to the generally high effectiveness of its heat exchanger and efficient heat utilization, but most of all to the

MIWE aircontrol. Because the quantity of circulated air and the baking temperature are mutually dependent, the MIWE aircontrol allows baking with increased air circulation, but with lower temperature, or shortened baking time within certain bakery-technical boundaries, in order to achieve an equal baking result with lower energy consumption. ▷

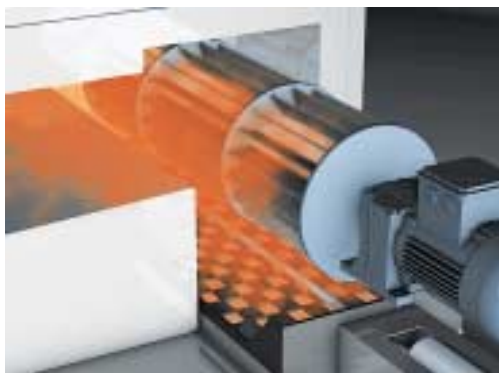


**Just reliable:**  
The opening of the dosing slide valve can be adjusted in ten intervals from 0 to 9 for every baking phase ...



... and of course just as convenient to program. This way you are able to create the perfect air circulation – in fine intervals – that is ideal for your respective product.

In normal baking process the dosing slide valve stays open according to the defined space in the settings you entered.



Complete opening provides a very rapid air circulation – the more the valve is closed, the more the settings go towards a stationary baking atmosphere.



During steam input, the dosing slide valve seals off the baking chamber: This creates a lush, even steam input with reduced water consumption.



In addition, you save expensive energy, because the heating unit is now no longer cooled off by the steam (and possibly calcified).



The illustrations show the MIWE lift-in, which – as „roll-in-brother“ – is of course also equipped with MIWE aircontrol.

How does it all work? It's simple: The MIWE roll-in is equipped with a dosing slide valve located between the baking chamber and the heating unit, and has an opening that is adjustable at will, from „closed“ to „open“. This slide valve basically reacts in real time. It can be opened or closed quickly and thus, separates the baking chamber from the heating unit. In two special cases this happens automatically: If the baking oven door is opened (saves energy!), or the steam input is turned on. Thus, the steam is not blown through the heating unit, and therefore also not cooled off.

It also must only fill a smaller room volume; meaning you need less steam (therefore: less water, less calcification, less energy). The steam is injected exactly where it is supposed to be: On your products. On the side, this procedure also spares your heating unit.

If the dosing slide valve does fail (which is rather unlikely due to its simple construction), you do not have to do without baking – other than with the market-common convection control system with frequency converter: One pull and the valve is open, and you can just continue baking.

Ingenuously simple. Simply ingenious. ■

PS.: You can find different baking programs for the MIWE aircontrol under [www.miwe.de/roll-in](http://www.miwe.de/roll-in). We will gladly also send them to you by mail, if you request this on the feedback form.

## „Magic key“

**A baking program is usually intended for a certain oven load – mostly full load. Then the energy profile on the one side, and the baking product weight on the other side fully correspond to each other. If one would use the same baking program for an only partially filled baking oven, the result would inevitably be falsified, because the heat energy input is significantly too high for the reduced quantity of baking products.**

It is, however, time and again the case that a baking oven needs to be operated with partial load. Until now, there was only makeshift help, for example with manual interference in the baking program, or with a so-called „half-load“-key, which more or less cuts back the energy input – these are all procedures that require extensive trial runs.

But the case is actually so simple – if you have a baking oven like the MIWE roll-in with the new control system MIWE TC.

Because it is equipped with an intelligent automatic capacity regulation, which reacts to (almost) every partial loads at will with an automatic correctly adapted baking program. In order to use this function, the baking program only needs to be run once at full load in the „Learning mode“. From then on, a push of a button is enough if the baking oven is only partially filled. The control system automatically adapts the energy input.

The trick is simple, but ingenious: Instead of controlling the temperature in the baking chamber over the clocked burner performance, the control system constantly compares the actual temperature with the target curve from the learning run, and automatically adjusts all other settings. This way also partial loads receive exactly the energy they need for baking. No matter whether you fill the baking oven half-full, to only a third, or three thirds.

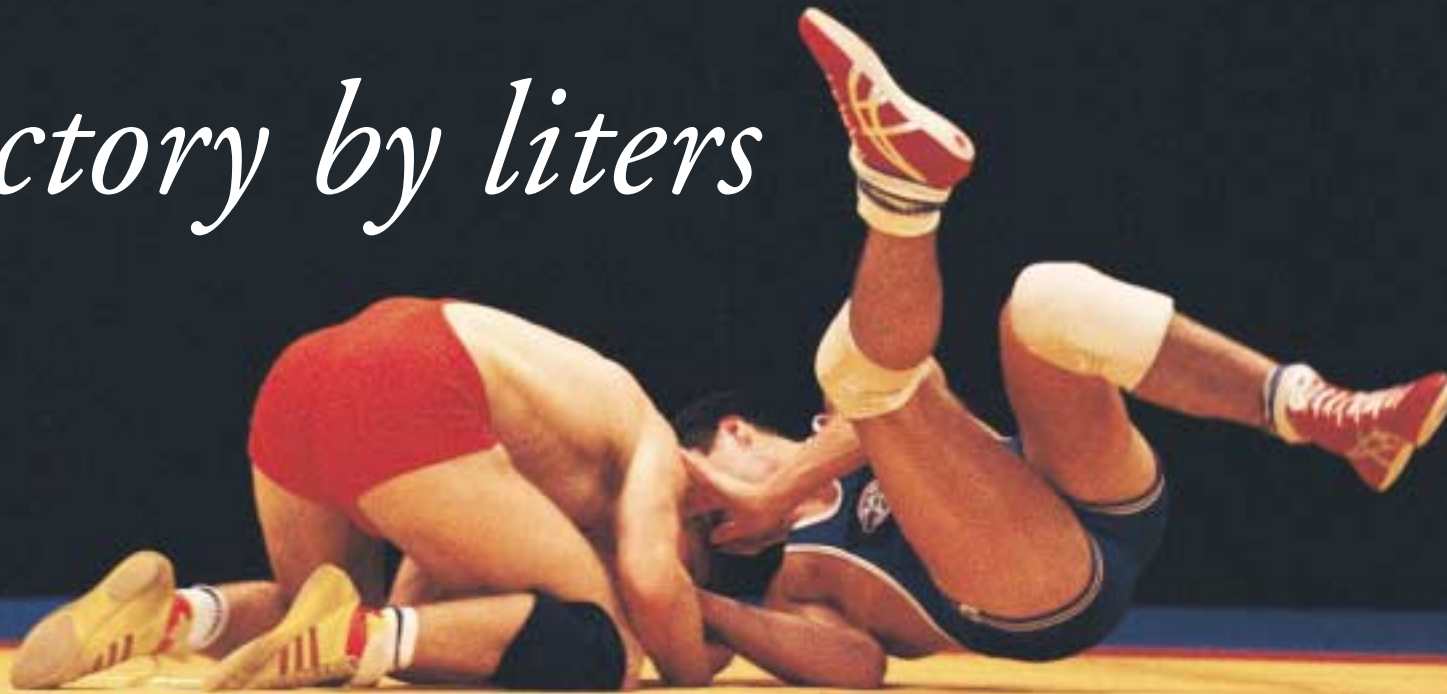
Again one less worry in the bakery. ■

*Perfect baking results also with partial load: The intelligent, self-learning automatic capacity regulation*

After the one-time „learning run“ the control system calculates a new (red) target value curve, which assures an equally good baking result – called up for partial load.



# Victory by liters



**Today, all manufacturers claim that their baking ovens are energy-saving. At Müllerbäck in Kist / Germany one wanted to know for a fact: For four weeks each, two rack ovens had to boast their skills in everyday work. During that time, a dial gauge recorded the oil consumption down to a tee.**

**The result of the field test was so clear that it almost left the bakers at Müllerbäck speechless.**

Since the very beginning, Müllerbäck in Kist has laid great emphasis on quality. Many years ago the business of Jakob-Ludwig Schantz and Lothar Skowronek was certified according to the ISO-standard as one of the first in the branch; since then two internal audits are conducted annually, in order to ensure the high quality standard.

But the two shareholders with meanwhile over 200 employees and 27 branch offices not only demand quality from themselves, but also from their suppliers. When talking about long-term investments, they inspect the offered products meticulously. Sometimes with astounding results.

When the issue of the purchase of a new rack oven came up in connection with a larger investment in new baking ovens, it was obvious to manager Jakob-Ludwig Schantz that not only the purchase price, but also the operating costs needed to be calculated thoroughly in the cost analysis.

„A baking oven that costs 1.000 Euros less, but subsequently has a higher oil consumption by 200 Euros every month for years to come is ultimately an expensive baking oven“, Schantz explains his contemplations. ▷

*Rack ovens in the tough field test. Who needs the least energy?*



„We had two baking ovens from German production on the shortlist. But how were we supposed to find out which one of the two ovens had the lower consumption value? Both manufacturers promised this. Therefore we did not have a choice but to test consumption in real life. Both manufacturers agreed to provide us with a rack oven for a period of four weeks. The specialists from ELCO (burner supplier) built a simple flow gauge into the oil input, and accompanied the test from a technical point of view. Then we started baking – our normal program. Twice, for four weeks.“

The first rack oven was said to achieve especially low consumption values due to an integrated frequency converter. At first, however, the oven caught the attention of the bakers at Müllerbäck with unsatisfactory baking results.

„We had to call a master baker of the company into our house three times in order to optimize the baking results“, Schantz reports. Then it was time for the MIWE roll-in. The baking results were perfect right from the start.

Already this fact would have been reason enough for Schantz and his companion Skowronek to choose the MIWE baking oven.

But when ELCO presented the measurement results of the oil consumption, it became totally clear which brand would receive a position in the bakery Müllerbäck: The MIWE roll-in consumed mind-blowing 20% less oil than the competitive oven in the same timeframe. „Smaller differences possibly could have been explained with minimal differences of the baked goods“, says Schantz. „But for one thing, the baking lists show clearly that identical products were baked in the compared periods of time. And secondly, the difference is so great that we cannot make outer circumstances responsible for this result. The MIWE roll-in simply consumes a fifth less energy than the other baking oven. You can calculate for yourself what that means in numbers as years go by.“

Yes, we can. And of course you can too. This is why we love passing on this information to you.

„I do not want to whitewash MIWE“, says Schantz as we say goodbye.

„But absolutely everything was perfect. The things that the MIWE employees told me were all true. The bakers that stand in front of the baking oven every day are enthusiastic about the baking quality. The service is sensational. MIWE is simply unique – I have never experienced such customer care from any other company. And many of my colleagues I meet in the Erfa-Circle\* are of the exact same opinion.“

This pleases us. As it does affirm once more that we mean it when we say: MIWE makes the bakers life easier. ■

\* Erfa circles are associations in Germany that have joined together for the mutual exchange of information.

Jakob-Ludwig Schantz and Lothar Skowronek at Müllerbäck wanted to have facts, and initiated a bakery test under tough real life conditions.



# Happy birthday!



1967 The „Rotator“

*The MIWE roll-in turns 40 – and is better than ever*

We almost feel like parents of a growing child: Sometimes we even have trouble believing that one of our most successful offspring's is celebrating its 40th Birthday these days.

But we have it on file: We delivered the very first rack oven in 1967, back then under the designation MIWE Rotator.

Just like so many other things that MIWE brought on, this rack oven also changed the world of bakers. With it the rational, rolling production had its entry into bakeries in Central Europe. True to our company motto, it has since made the bakers life simple in many aspects.

We now use the occasion of the anniversary for a short flashback.



1969 The for those times back then revolutionary „Rotator“ turns into the MIWE roll-in



1971 The 2nd generation is already assembled as oven battery



1977 Already the 3rd generation sports the clean-cut, easy-care front



1980 Thanks to back-side firing, the doors can be moved closer towards each other



1983 This is what the first computer(!)- control system looked like back then



1983 Two or even four in one batch: The MIWE roll-in „jumbo“



1985 In-store baking on the big scale with the MIWE roll-in „shopping“



1986 The type „medio“ for medium batches with up to 12 baking sheets 60 / 80 cm



1987 For the first time with top-firing (of course optionally for oil, gas, or electricity)



1992 The digital MIWE DS becomes the new standard control system



1993 Baking of frozen small products with the new generation of MIWE CS control



2003 The most recent generation: more glass, less edges, small floor space



2003 Simple operation with fixed program control system



2004 Optimal baking with less energy thanks to MIWE aircontrol



2007 The MIWE lift-in allows suspended loading as a first



2007 The Touchscreen-control system MIWE TC provides perfect control

Right side: In the year 1967 it was a revolutionary postulate: „Don't carry what you can drive!“ and „Don't touch what can stay there!“, Prof. Dr. Edgar Michael Wenz wrote exactly 40 years ago; ...

Already back in the sixties, Edgar Michael Wenz, owner and manager of MIWE at that time had already exposed the most important advantages of the rack ovens in the brief elocution typical for him: „The rationalization effect is incomparably large. Everything rolls. The floor space utilization is extremely high.“ This has not changed until this day: The baked goods only need to be „handled“, meaning placed manually or automatically on baking trays once: After make up. These baking trays are then inserted into a rack trolley (read more information about the German designation „Stikken“ (rack) on page 31 in the black box). From here on until the withdrawal of the finished baked goods, nothing needs to be relocated, or lifted, or carried: „Everything rolls.“

... today, in every bakery, we can see that this pioneering thought has established itself worldwide.

The home of the rack oven, which was originally also called baking cabinet or chamber oven, lies in Scandinavia, more exact: In Sweden.

From there MIWE also received the baking chambers of the very first rack ovens. Because however only a baking oven from own production can be optimized in all details, and produced in accordance with the own high quality standards, MIWE brought a self-developed rack oven onto the market relatively early, in 1969.

Also in the process of naming our rack oven we went our own way: We asked the visitors at the iba 1968. The favorite by far was „roll-in“. And this is why until today, it is called: MIWE roll-in. The fact that especially teaching and specialist books use the designation „roll-in-oven“ as a collective term for rack ovens of all kinds in the meantime only shows us once more to which extent the MIWE roll-in is perceived as the epitome of a rack oven on the market. No wonder: Over the course of years we have delivered over 10.000 (!!!) baking ovens of this type in total. >



## »STIKKENOFEN«

# MiWe ROTATOR

Der Stikkenofen hat den skandinavischen Markt erobert. Er wurde Rationalisierungs-Vorteile waren dafür entscheidend. Von der Teigzubereitung bis zum Verkauf – im Gärraum, im Backofen und im Lager – stets bleibt die Backware sitzen; sie braucht nicht angefasst zu werden. Sie wird auch nicht getragen, sie wird gefahren.

Der Stikkenofen **MIWE-ROTATOR** ist das Ergebnis einer Kooperation zwischen einer führenden schwedischen Backofenfabrik, die wesentlich zur Erfindung und Durchsetzung des Stikkenofens beigetragen hat, und uns, die wir schon seit eh und je um die technische Fortentwicklung bemüht waren.

Mit dem Stikkenofen **MIWE-ROTATOR** läßt sich eine weitgehende automatische Produktion von Backwaren aller Art einrichten. Der Stikkenofen **MIWE-ROTATOR** schließt die Lücke zwischen Etageöfen und automatischem Revozier- oder Durchlauföfen – ist also der Backofen für den aufwärts strebenden Betrieb.

1. Trage nicht, was du fahren kannst!  
 2. Fasse nicht an, was liegen bleiben kann!

# MIWE MICHAEL WENZ • ARNSTEIN



It could be called „Model T“: This oven was developed as hatch unit between bakery and store – long before the introduction of sight-and-smell-baking. However, it was sold only rarely, a destiny it shares with many ideas that were offered to a skeptic audience „before their time“.

Clear-cut, easy-care surface made of hygienic stainless steel, unobstructed view of the baking goods, and intelligent, convenient control systems are characteristic for the most recent generation of one of the most successful baking oven models.

Based on the ground principle that was successful from the start, various further variants of the MIWE roll-in were created for special purposes over the years, some of which are a firm component of the MIWE range until today: The double and the 4 rack ovens with the self-explanatory name „jumbo“ for example, that offer two times, respectively four times the baking space and accordingly higher efficiency on only a slightly larger floor space, or the MIWE roll-in „shopping“, a rack oven especially for stores, which was even delivered as hatch unit with two opposite doors (for loading in the bakery and unloading from the store) – a typical child of the eighties, when the spatial unity of bakery and salesroom was still order of business.

The „medio“ is intended for smaller bakeries, or use in stores, as it finds room also in lower facilities with a total height of 2.33 m.

Not only technical advancement and material development, but also the increased quality requirements in the bakery are shown on a small detail of the MIWE roll-in, namely

by the development of the viewing window, which originated from a small peephole, but covers the entire door front today, and therefore offers best views of the hot events inside.

Contrary to some other rack ovens, the MIWE roll-in was equipped with a rotating plate on the floor of the baking chamber right from the beginning. This has several advantages in real life. For one thing, the rack trolley can be driven in at ground level; neither muscle power nor a special lifting device is needed.

On the other hand, this way totally different rack trolleys can be used for baking, while suspended rack trolleys require the fitting height as well as the matching suspension device of the rack trolleys (which is often overlooked in the purchase of a new baking oven, and then may cause far-reaching consequential costs). There are, however, by all means economically strong countries, in which suspended loading is common, therefore MIWE offers a variant of the MIWE roll-in in those markets – the MIWE lift-in

– which is equipped with a special device for lifting the freely rotating rack trolleys. The firing of the MIWE rack oven was at first assembled on the side (due to construction reasons), but was soon relocated to the back (so-called „back-firing“). This enabled a more narrow floor space, the paths in the bakery were significantly shortened, operation therefore accelerated. Later the type FO was added, with the firing unit located on top of the baking chamber, which leads to further improvement of the space utilization factor.

One more thing that can be studied by means of the history of the MIWE roll-in: The rapid advancements of the MIWE baking oven control systems. It constantly reminds you of how these developments have contributed in making the bakers life easier.

The first baking ovens were still delivered with the classic manual control system, in which all baking parameters (for example temperature, down time of the circulator, or regulator) had to be regulated by hand, light bulbs and manual

switches used to characterize the picture. But soon the first fully automatic control system came onto the scene with the MIWE elektromat, which allowed the operator to leave the oven to work all by itself, after setting the baking program, until an acoustic signal indicated the end of the baking process.

The computer control system MIWE CS, which was first built into the MIWE roll-in in 1983 was even more convenient. It immensely facilitated operation, as now finally up to 99 complete baking programs with their individual baking phases could be saved and called up by the push of a button. The MIWE CS was soon equipped with a hygienically even more advantageous foil keyboard and monochrome display.

As networking found its entrance into bakeries, the MIWE DS offered an additional network-compatible digital control system to the market, which – like the refurbished MIWE CS – gave the MIWE roll-in access to Computer Aided Baking and company-wide networks. ▷

What is a rack trolley?  
Simply read the small excursion  
in the black box.



One author copies it from another:

The thesis that „stikken“ is the Scandinavian, Low German, or Dutch designation for an inclined rack. Critical as we are, we wanted to know for sure. A glance into a dictionary shows: There is a word „stikken“ in Dutch language as well as in Low German, in Danish, and in Swedish language. But there is hardly any indication towards an inclined rack.

In Danish a „stik“ is a stopper or a plug; Danish „stikke“ means prickles, stinging, or pricking (therefore also „stikkelsbær“, in German: Stachelbeere, English Gooseberry). In Dutch „stikken“ corresponds to the word stitching, but also back-stitching, and suffocating.

What the Netherlander exactly means with „stik“, well, we don't really want to translate that here – but it is definitely not an inclined rack. Swedish language knows „stick“ (the sting) and „sticka“ (the splitter, the knitting needle).

In Ahaus there was a „Stikken factory“ until 1978, which did however not produce inclined racks for baking, but matches (from swed. „tandstikker“ for matches). Also north German „native speakers“ we asked associated the word with the meaning „(pointed) rod, pole“.

Which allows the assumption that a „Stikken“ in the northern European region primarily stands for what we in Franconia call a „Stichel“: a long stick. This explanation also leads us to the inclined rack, as it is, if we trust Wikipedia, nothing but than a „frame of crosswise connected poles or laths“.

The rack trolley in the bakery therefore owes its name to the pole-like braces it is made of. And with the issue, namely the rack oven, the word has also become native in standard German – not least thanks to our initiative.





The MIWE lift-in is the most recent offspring of the „roll-in-family“, a tribute to those countries in which tradition prefers to bake with suspended rack trolleys.

The most recent chapter in the control system history of the MIWE roll-in is the new MIWE TC, which is introduced in detail in another section of this issue of the MIWE impulse. That is why we can keep it short here: It can do everything that the MIWE CS can. But beyond that it offers numerous additional possibilities and advantages: For example the simple change between the Easy-Mode and the Pro-Mode, graphic displays of product and baking process, easiest operation with the touch of a finger on the absolutely plane display.

And of course also the specialties are available with which MIWE makes baking as easy as never before: The operation of the MIWE aircontrol for energy-saving, optimized baking, the automated baking of frozen small products, and the automatic capacity regulation, gradient temperature baking. This is also explained in detail in another chapter of this issue.

With so many changes, it is easy to lose sight of the fact that there are a number of constant factors in the history of the MIWE roll-in. One to be emphasized would be the excellent evenness of the baking results that we achieve through an elaborate air flow in the baking chamber. Or its heating performance, which together with an amply dimensioned steam device allows baking batch after batch even with shortest baking times.

The demountability should also be mentioned here. Contrary to many competitive models, the MIWE roll-in is screwed onto a stable base frame, not permanently welded. This provides the unit with the same stability as with a welded seam, but leaves the baker the possibility of demounting the unit at any later time, and re-assembling it at another location. Another characteristic of the MIWE roll-in from the early days is the use of high-quality steel metals that provide the hygienic



advantages that bakers value, along with the permanent stability, and a perfect surface finish. Today the MIWE roll-in is available with baking spaces of 5 to 24 m<sup>2</sup>, for one or two rack trolleys, for baking trays of 60x40 to 67x108 cm, and for all different heating methods (oil, gas, electric).

Numerous veterans that have been performing their services for decades now prove that the MIWE roll-in is tough, and does not give in quickly even under constant strain. We want to tell you about one special case.

At Lufthansa Catering (that is not for nothing widely known for its high-quality menus on board), baking and cooking is on the program around the clock. Because optimal quality is also important next to efficiency, the master bakers of the renowned airline had decided on the MIWE roll-in early on. Several MIWE baking ovens of the caterer are from the year 1979.

A battery of MIWE roll-ins, which were in operation around the clock for ten years (which corresponds to a lifetime of almost 30 years under normal circumstances), was replaced by new MIWE roll-in only a few years ago. But now the new airbus A-380 has its entrance with even higher passenger numbers. Lufthansa Catering is already preparing for this event with an entirely new building for kitchen and bakery, which is scheduled to be opened in spring of 2008.

And now guess with which rack ovens Lufthansa is using to prepare for the future? ■

Whether for large or small baking sheets, for one or two rack trolleys, high or low – with over 10.000 installed baking ovens the MIWE roll-in is surely one of the most successful (and tried and tested!) oven types worldwide. Thank you for your trust!



# On the road

*How to accommodate life on the road and sophisticated baking*

**Bill Kleinegger is on the road a lot. As member of the „RV Care-A-Vanners“ he belongs to those Americans that are on the road in an „RV“ (Recreational Vehicle) everyday, and offer their service for a good purpose: For „Habitat for Humanity“, a charity organization that builds basic accommodation for people in need all over the world, Bill helps to build houses in the USA, – sometimes here, other times there, wherever he is needed.**

He has traveled far. He has built houses in Connecticut, New York, South Carolina, Florida, Louisiana, Colorado, and Wyoming. In general, he stays at one construction site for two weeks.

Why are we telling you this? Because Bill is not only a dedicated traveler by RV, but also a baker at heart and soul. He acquired his skills at the highly renowned Culinary Institute of America in Hyde Park, New York.

One thing he learned there is his thoroughgoingness when it comes to quality in baking. It starts with the ingredients, and includes the tools. When the issue came up of finding the right baking oven for use in the RV, Bill only wanted one type: A MIWE condo, which unifies mobility and excellent baking quality in one device like no other.

Now he bakes on his „MIWE“ – especially on the weekends, when he does not have to build any houses. Rustic sourdough bread (his favorite) is included in his repertoire just like fine baguettes or an own creation of rice, whole grain, and wheat flour, which he calls his „daily bread“. He finds excited customers en masse, in his circle of friends and family, but of course also on the construction sites where he helps out.

The only thing left to say is that we wish him and the good cause further success. ■

A panel in the „baking mobile“ makes the MIWE condo accessible also from the backside



■ You can find our current fair dates around the globe at [www.miwe.com/news](http://www.miwe.com/news)



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