



MIWE GVA / GVA e+ / GUV / GV



Taste that comes from the cold.

Good bakers have always known that the quality of their products is already determined before the baking process. They have realised that careful temperature and humidity control has far more potential

than simply reducing working hours. They also know that only those who can offer holistic solutions can cope with the entire range of climate-controlled processes in the bakehouse, because only those who have an overview of all the parameters

will be able to optimise specific processes. It doesn't make any difference whether you prefer standard components or customised systems – sooner or later you will come to us. MIWE bakery refrigeration – the best thing that can happen to your baked products.

MIWE GVA fully automatic proofing unit (-20° C to +40° C)

- ▶ Cost reduction: change night work to day work. Baking can be carried out immediately upon starting work.
- ▶ Versatile and flexible thanks to the temperature range and the extremely wide choice of humidity settings (up to 98% RH).
- ▶ Proofing, proofing retardation, fast cooling, proofing interruption or stiffening: the MIWE GVA masters all climate-controlled processes in any sequence and in freely selectable time segments. Each process curve can be displayed and performed precisely.
- ▶ The MIWE GVA e+, which has been awarded the e+ seal of quality, combines perfect hygiene, extremely low levels of energy use and excellent product quality.
- ▶ Reproducible quality at the highest level: thanks to the touchscreen control system MIWE TC, up to 8 program sections can be easily defined and called up reliably with constant results.
- ▶ No waiting time: the active moistening system provides steam immediately at any time.
- ▶ The air guide system also enables the continuous "freezing" function or long-time storage in connection with the optional thawing, door frame and drain heating systems.
- ▶ More taste: in each phase of the programme, the fan can be controlled separately. This improves enzymatic development, resulting in improved taste and volume.
- ▶ Interior fittings and floor tub (slip-resistance class R12) made of easy-to-clean, hygienic stainless steel. Fronts, which are normally coated in white, are also available in stainless steel.
- ▶ Energy-saving: the universal 80 mm (optionally 100 mm) thick and continuous insulation prevents cold bridges and loss of energy.

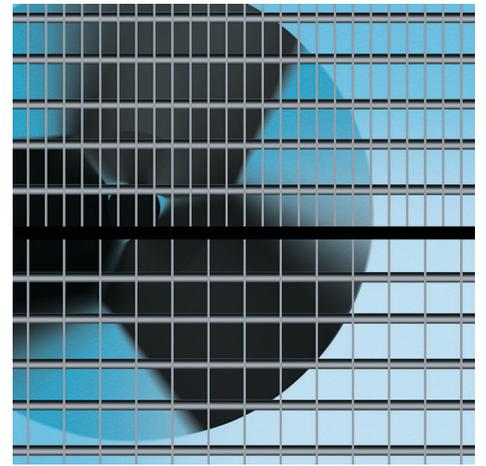
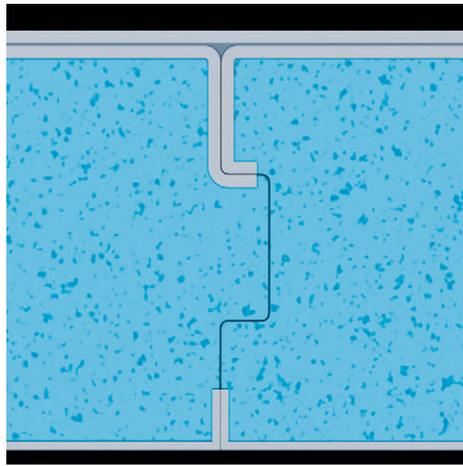
MIWE GUV proofing interruption unit (-20° C to +15° C)

- ▶ Ideal wherever the special proofing abilities (active moistening included) of the MIWE GVA are not necessary. The MIWE GUV is equal to the MIWE GVA in all other areas and can also be optimally used with the optional humidifier as a defrosting and recovery cell.

MIWE GV proofing retarder (-5° C to +15° C)

- ▶ Perfect for the flavour-increasing, retarded proofing method (up to 36 hours). Even deep-frozen products can be defrosted in a controlled manner thanks to the special heating system.





MIWE's expertise covers the entire range of climate-controlled processes in bakeries and, thanks to this extensive experience, we are able to offer integrated solutions, which are more than only a total of individual parts. We know the many details that really matter. Therefore, our refrigerating units, for example, are provided with floors well-suited for bakers, ram protection all the way around, and air guide systems made out of hygienic stainless steel elements, which can be removed by hand for cleaning.

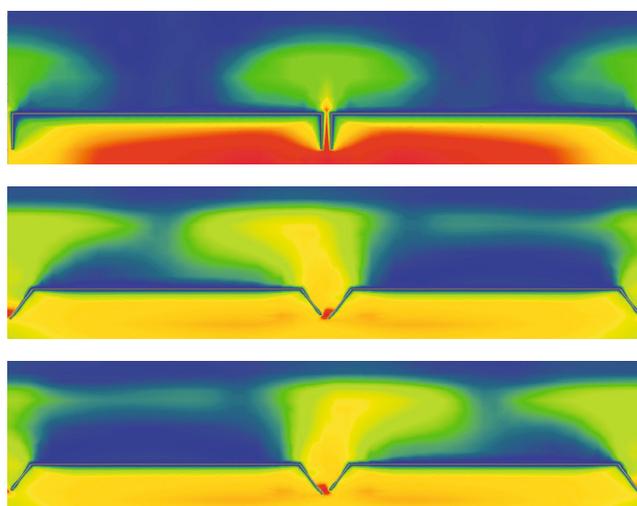
Simply consider the flexibility our concept gives you. You are not bound to any modular dimensions, but can obtain any unit with any dimensions. This way you can make the best use of the available space. Or just take a look at the bottom: the MIWE seamless floor, which is very easy to clean, is a standard feature for many versions and, of course, optionally available for all the others too. A special double-bent floor joint with a stainless steel covering stuck across the whole surface provides not only better hygienic features in our refrigerating units but also offers much more protection against penetrating moisture.

Generally, MIWE does not only glue the walls and floors together, but rather it connects them with a tongue-and-groove joint construction by means of a cam-type closure, resulting in better endurance, fewer thermal bridges, and lower operating costs. We not only pay attention to sufficient evaporation surface, but also to optimum space between the evaporator's plates. Since this allows us to prevent unnecessary defrosting phases, five different spaces are used – depending on the climate zone. Good for your product. Good for your budget. Good for you.

MIWE bakery refrigeration in detail

All these things make baking easier (from left to right):

The hygienic, easy-to-clean base pan with overhanging drip edge, the stainless steel covering stuck across the whole surface and with a joint offset to the base pan, preventing moisture from entering and, last but not least, individually optimised evaporator-plate spacings (important in 24-hr operation!).



Small feature with a big effect:

Alternating air outlets (see photo on the left) ensure wider distribution of air.

A computer analysis of the horizontal section (right) illustrates it perfectly: Above, traditional outlets with high flow velocity in the pressure wall, but minimal distribution outside the wall. Below, much better flow in the chamber (alternating left/right).

The MIWE TC touchscreen control system offers state-of-the-art ease of use in refrigeration technology: A big clear touchscreen display with graphic representation of the setpoint /actual curves, variable programming of up to 99 programmes with up to eight phases each, and power-ful networking via different standard interfaces. Far more importantly, however, is the enormous boost in the quality of your products and the surprisingly high degree of flexibility in the dough process, which is made possible by this innovative control system with extremely convenient operation.

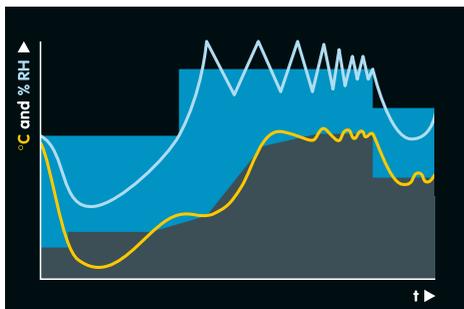
In the MIWE TC, the individual phases in the climate-controlled processes ("programmes") are not preset as fixed processes in a predefined order. Any combination is possible (with the exception of proofing interruption) and they can be carried out more than once within one and the same programme if necessary. You need no longer follow a preset temperature-humidity curve, but you can save any combinations you wish to ensure dough processing and procedures tailor-made to suit your requirements. A combination of traditional, conventional processes and modern methods such as soft chilling is therefore always possible.

You can achieve additional qualitative optimisation, and especially when ambient temperatures are higher, you can also optimise energy use with the optional energy package by means of which the refrigerating machine or the compressors can be steplessly controlled via the frequency converters. The "Delta T", that is, the temperature difference between the room air conditions and the baked products, is decisive for the product quality and energy consumption and can be controlled with a previously unimaginable high level of precision, which fundamentally affects the baked products. The extremely precise control makes it possible to reduce dehumidification of the baked products during cooling to such an extent that the previously usual process of "regenerative humidification" when heating is no longer necessary, as the desired moisture remains in the dough when it cools. Naturally, less moisture than ice is deposited on the evaporator in such a way that defrosting is carried out more seldom or for shorter periods of time, especially since an intelligent defrosting system continuously controls the evaporator capacity. An optimised refrigerant current, however, allows for improved power output and therefore more efficient energy use.



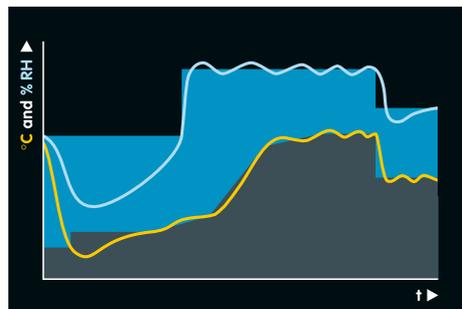
The main display: Efficient and with a clear layout, it displays all parameters in graphic and/or alphanumeric form. The black blocks stand for the individual phases with the respective setpoint setting; the yellow graph shows how the MIWE GVA converts the setpoint values into actual temperatures in real time, whereas the blue graph shows the humidity.

You will find other screen shots on the last page of this product information.



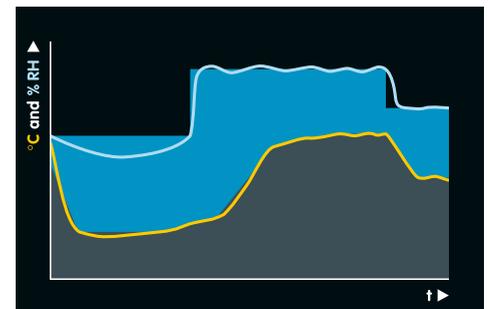
Conventional control system:

Clear deflections of the actual curve for humidity (blue) and temperature (yellow). The surfaces are the respective setpoint settings.



MIWE TC:

Considerable improvement due setpoint/actual curve approximation.



MIWE TC with energy package:

The setpoint /actual curves for temperature and humidity are almost congruent.

Control system

From top left to bottom right:

Creation and modification of programmes: it has never been as easy and clear as it is with the MIWE TC

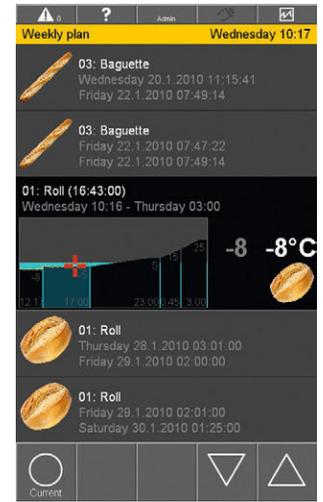
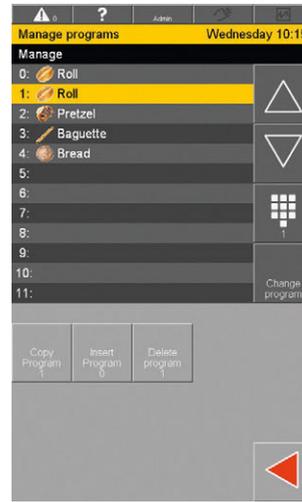
Selection of stored programmes

You can easily view finished and pending programmes in the weekly plan – the programme currently running is displayed with a temperature curve

The recorder meticulously documents all processes and archives them for up to one year

Only MIWE TC offers you the whole functional range and the overview in manual mode.

Individual timer / storing position management



Technical data

Temperature range °C
Relative humidity %RH
Trolley type
Number of trolleys
Baking tray size ***
Insulation mm
Slip-resistance class
Control system
Energy package
Winter adjustment

	MIWE GVA / GVA e+	MIWE GUV	MIWE GV
Temperature range °C	-20 to +40	-20 to +15	0 to +15
Relative humidity %RH	up to 98%, adjustable	high*	high
Trolley type	Rack/proofing trolley	Rack/proofing trolley	Rack/proofing trolley
Number of trolleys	1 – ∞	1 – ∞	1 – ∞
Baking tray size ***	60 / 80 or 60 / 100	60 / 80 or 60 / 100	60 / 80 or 60 / 100
Insulation mm	80 / optionally 100 mm**	80 / optionally 100 mm**	80 / optionally 100 mm**
Slip-resistance class	R12	R12	R12
Control system	TC	TC	TC
Energy package	optional	optional	optional
Winter adjustment	optional	optional	optional

* Optional with active humidifier (see GVA).
** Thicker insulation available on request.
*** Further tray sizes available on request.