MIWE impulse

From Siberia to the South Sea:
the perfect system for every task

From Siberia to the South Sea

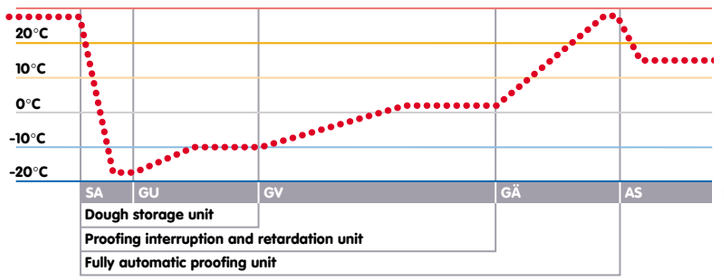
You probably remember that in the last issue of our magazine, MIWE impulse, we described the basics of refrigeration and temperature control technology in the baking industry. We pointed out that the programming of the temperature, moisture and air flow as well as the dimensions of the refrigeration unit for a specific purpose were all of the utmost importance. We demonstrated how finely-tuned refrigeration temperatures can lead to better results not only in the bakery product but also in a company's turnover.
No matter which role bakery refrigeration plays for you, we have the appropriate concept and method. MIWE's bakery refrigeration product program offers a suitable systematic solution for each and every task from the peal board to the tray to the roll line.
We'd like to show you how we implement our technology for the most common refrigeration methods and systems.

The Fully-automatic Proofing Unit (GVA)

This fully-automatic unit contains all the various temperature phases and ranges and can be put into operation anywhere. This proofing unit cools quickly, interrupts the proofing phase and ensures even defrosting and proofing. Temperatures can range from -25 °C to +45 °C and the relative moisture range can be regulated to between 60 and 98 %.

The temperature chart here demonstrates the typical sequence. The dough is cooled quickly in phase 1 and then frozen in phase 2. During the third phase or storage phase, the yeast remains inactive and enzymatic processes are halted. The dough is then defrosted a second time. During the proofing retardation phase, the dough develops its flavor at +4 °C. After 6 to 8 hours of retardation, the dough must be proofed within 2 to 3 hours. This resting phase is nothing more than proofing retardation and it enables the baking

From minus 25° C to plus 45° C: please find the right system for your individual requirements



SA: Fast cooling
GU: Proofing interruption
GV: Proofing retardation
GÄ: Proofing
AS: Hardening phase

The Fully-automatic Proofing Unit lives up to its name: the changes in temperature are fully-automatic

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Uniform on the outside, multipurpose on the inside: programming to meet your individual needs

process to be postponed without reducing the quality of the final product. The MIWE GVA uses user-friendly computer programming that can be integrated into any computer system. Should you not need the lower temperatures, proofing retardation units can be integrated for defrosting or for proofing retardation and interruption.

The Proofing Retardation Unit (GV)

Proofing retardation is the simplest type of refrigeration and temperature control unit which ensures that the yeast remains inactive and that the breakdown in enzymes is delayed. The ideal storing temperature lies between -4 °C and +10 °C based on the type of bakery good. In general, relative moisture is rather high at 90 to 95 % in order not to affect the amount of moisture in the dough. This high level of moisture can be achieved through surface evaporation and a minimum of air flow within the refrigeration unit. Bakery products can be stored a maximum of 24 hours and therefore oven-fresh bakery goods throughout the day are never a problem. Aside from the optimal proofing and resting phases, the real benefits include long-lasting good flavor and freshness of the crust.

Proofing Interruption in the TLK Unit

In the TLK Units the bread yeast becomes inactive and the breakdown in enzymes is stopped. The dough is stored at a temperature of between -18 °C to -20° C with the relative moisture level at 90 to 95%.
The advantages of this method mean that preparing the dough is not linked to the actual baking of the product. Preparing the dough in advance and storing it in a TLK unit means that your baking plan can be extremely flexible and everything needn't be baked during a few peak hours. This ensures a wide variety of bakery products with very little effort involved.

The Semi-automatic Proofing Interruption or Retardation Unit

The semi-automatic unit differs from the fully-automatic one in that it has no proofing function. This unit has the advantage that portions of a batch of dough can be taken out

The new MIWE CS Computer Programming is simple to operate and can be integrated into all the MIWE baking ovens

Combined system includes flash freezing, freezing, dough storage unit, proofing retardation, and proofing interruption and retardation

A sophisticated, user-friendly system: two rows of ventilators (right) ensure a precision-driven flow of air as of the fully-automatic proofing unit (GVA) and the proofing and retardation unit (GUV); easily-removable pressure walls (below) make regular cleaning a breeze.

and proofed and then baked. In this way, a bakery can bake "just-in-time" to please its customers. Moreover, this semi-automatic unit can retard proofing which ensures a better flavor and long-lasting freshness of the crust.

The Flash Freezing Unit

Ice crystal build-up is about the worst thing that can happen to lower the quality of a bakery product during freezing. The more quickly the dough can be frozen, the better the overall product. We offer flash freezing stations that can flash freeze large amounts of dough extremely fast without the build-up of such ice crystals. Our gentle flash freezing system increases storage time and ensures continual production and consistency in quality.

Specialists for Special Tasks

We naturally go a step further and offer special refrigeration technology for cream products that can be frozen quickly at extremely high moisture levels and with a minimum of air flow.

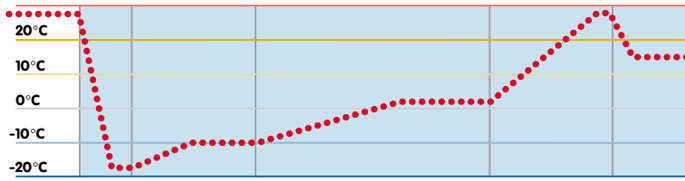
MIWE Bakery Refrigeration does all these things

Because bakery refrigeration technology has to fulfill such a wide variety of tasks, it is important to choose a company that is experienced in such technical know-how and can offer the best concepts and refrigeration units to meet your exact needs.

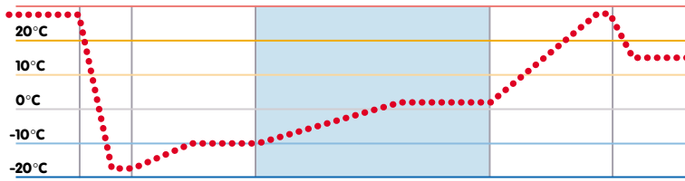
You require a company that understands the baking industry from A to Z; one that can effortlessly integrate individual components into your bakery installation to guarantee you baking success time after time.

MIWE is such a company and we at MIWE know what our job entails: helping you to be successful. We would be happy to give you more detailed information about our Bakery Refrigeration.

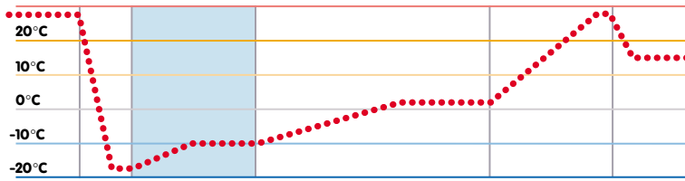
Please contact us. Our experts will get back to you very soon.



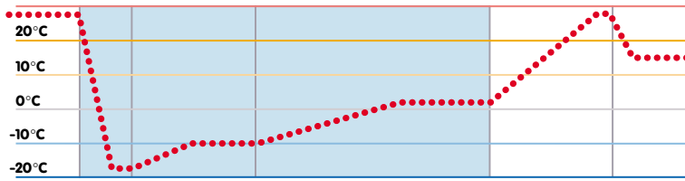
▲ Temperature range of MIWE GVA Fully-automatic Proofing Unit



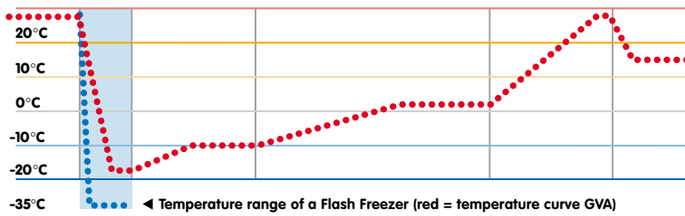
▲ Temperature range of a MIWE GV Proofing Retardation Unit



▲ Temperature range of a MIWE TLK Dough Storage Unit



▲ Temperature range of a MIWE GUV Proofing Interruption and Retardation Unit



◀ Temperature range of a Flash Freezer (red = temperature curve GVA)

The inside of a Dough Storage Unit (TLK) and its patented air flow system

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