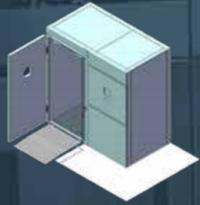


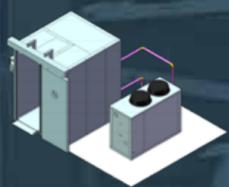
WEBER COOLING SOLUTIONS FOR BREAD & BAKERY

WEBAKE ECO: Lowest cost & energy



The ECO model uses refrigerant-free cooling technology: We cool with water! With strong vacuum, it gives perfect results for croissant, (crispy) buns and baguettes.

WEBAKE POWER: Maximum control & performance



The POWER model can cool (almost) all bakery products. With perfect control of the cooling cycle. Resulting in perfect products, cooled within minutes.

WEBAKE MULTI-ROOM: Flexible, scalable, affordable



Our POWER system can be scaled up to a multi-room solution with central cooling. For maximum flexibility and optimized logistics, at minimized costs.

AFFORDABLE TECHNOLOGY

Looking at the market for vacuum coolers for bakery applications, you will find several suppliers of bakery equipment who also make vacuum coolers. **Weber Cooling is a supplier whose core competence is making vacuum coolers.**

Thanks to our agile, low-cost organization, our economies of scale (producing more vacuum coolers than all the other bakery suppliers combined) and our intelligent design (modular technology based on hundreds of machines built, for a wide range of both fresh & food applications).

Weber Cooling can offer vacuum coolers for game-changing prices, finally making vacuum cooling affordable for almost all bakeries.

Combining our rich experience in this field with in-depth research of the technology needed for cooling bakery products we have developed a special range of solutions for this market.

Weber Cooling is the first to offer real affordable solutions for bakery vacuum cooling!



VACUUM BAKING EXPERIENCE CENTERS

At our test centers you can bake & vacuum cool your own recipes, and experience the productivity increase and quality improvement vacuum cooling can bring for your bakery products. We currently have three facilities, each with their dedicated Master Bakers. One in the Netherlands, and two in Asia (in Japan & the Philippines). Our bakery centers are equipped to bake & cool all your bakery products. Our experienced vacuum baking specialist will define the optimal testing program with you. At the end of the day(s) you have seen for yourself what quality improvements are possible for your products, and what productivity gains you can achieve through baking time reduction.

MAINTENANCE & SUPPORT

The required maintenance time for a vacuum cooling system is very low compared to a conventional cooling system, which needs at least a weekly maintenance - defrosting, cleaning etc. A vacuum cooling system needs 4 to 8 hours maintenance per year in no more than 1 or 2 maintenance operations.

Weber Cooling is specialized in servicing vacuum coolers - at affordable costs, both from their own products as also for all other brands. We offer our support both through our European and Asian sales & service centers and can also rely on a wide net of affiliated sales & service partners. This way we can guarantee our customers maximum up-time, at lowest costs.



Experience what Vacuum Baking can bring for you!

VACUUM COOLING Rises Through the Ranks

Vacuum cooling has been around for decades, but it's only today that the technology has reached a level of maturity high enough to gain widespread acceptance especially for bakery applications. Understanding the implications on the baking process and adapting the right parameters to it will result in premium bakery products, with respect to structure, volume, shelf life & optimum crispness. It will also provide you with strongly improved baking economics.

Tudor Vintiloiu - European Baker & Biscuit | Issue 1 - 2019

- 90%** average reduction of the cooling time
- 80%** average saving on cooling space
- 50%** minimum increase in productivity that you can expect
- 30%** average reduction of the baking process time
- 4 - 8** hours/year is the average maintenance requirement

To see is to believe !

Visit our LIVE Vacuum Baking Demonstrations:

IBIE - Las Vegas (USA)
Sept 8th - 11th | Booth 355

Südback - Stuttgart (D)
Sept 21st - 24th | Booth 7A-51

Meet with our experts
We gladly share our knowledge with you!



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CHANGING THE WAY OF BAKING ...

“Vacuum Cooling means more than cooling, it takes over part of the baking process. That’s why the baking process time is shortened by this technique.”

Vacuum Cooling will become an integral part of your bakery process, as the baking process continues in the cooler. By reducing the pressure (creating vacuum) in the room, the

water in the bread is forced to continue cooking.

This has two effects:

- The bread starts cooling (from the core) as the cooking needs energy, and it can only take this energy from the bread itself, resulting in a rapid cooling process
- Due to the presence of steam during the vacuum process, the activity of starch gelation continues. This means that your products will continue baking while they are being cooled

One needs to understand the implications, and adapt their process to it, reducing baking times, increasing oven temperature and even sometimes modifying the proofing time and recipe. Failing to consider these modifications will prompt undesirable effects on product quality.

Embracing the advantages that this technology can bring, however, will result in premium bakery products. Vacuum cooling can only be successful when reliable technique is supported by knowledge of the process technology. One of the main challenges in this respect is the change of know-how in an industry that has remained fundamentally unchanged for roughly 3000 years. It requires a mind change!

At the **Weber Cooling Experience Centers** (both in Europe & Asia) our Vacuum Baking Experts will be happy to assist you with optimizing the conditions for your bakery products. All equipment & technical expertise is available to bake & cool your products, and to fine-tune the parameters (and where needed your recipe) to obtain the most perfect results, in quality, shelf-life and economics.

“There is almost no limitation to products. With various adjustable cooling curves and storable programs, vacuum conditioning makes it possible to simplify process steps for a very wide range of both baked and pre-baked goods”

50% Shorter baking time has been achieved with this bread



... INCREASES QUALITY & SHELF-LIFE ...

Embracing the advantages that Vacuum Cooling can bring will result in premium bakery products:

- A **larger volume**, as during the cooling process there is a pulling effect on the bread, preventing the natural shrinking you normally would get.
- A **more homogenous and tender internal structure**, as the gelation process continues under vacuum and the capillary action gives a finer structure and even a whiter color!
- A **higher resilience** related also to the finer and more regular structure, in combination with a high free water content in the bread; possible by optimizing the baking time related to the cooling process.

- A **crispier crust** which will stay crispy for a longer time, as the moisture is mostly sucked out (also for cookies: less moisture will lead to a longer crispness!)

“For gluten-free bakeries the advantages vacuum can bring are exceptional. With vacuum you can easily bake even the most difficult gluten free recipe and can produce bread which has a texture & bite comparable to normal bread.”



CONVENTIONAL

VACUUM

- As **bacteria growth will be virtually zero** during the cooling time, an additional advantage of vacuum cooling is the increase in shelf life which can be achieved! The bread comes into the cooler sterile. During the cooling, air is being sucked out (no bacteria coming in) and the residence time between 60 – 30 °C (where bacteria like to grow) is extremely short; plus, there is no risk of condensation.

The longer shelf life is also boosted by the prolonged freshness, thanks to the high resilience and the continued crispness, as mentioned above!

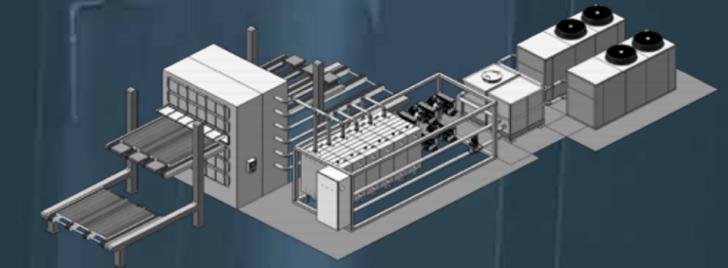
... AND IMPROVES YOUR ECONOMICS

From a business perspective, one of the advantages vacuum cooling brings, is the substantial reduction of process time, resulting from both (on average 30%) shorter baking and a (on average 90%) shorter cooling time.

As an example, the total production time of a tin bread normally takes 4 hours or more from mixing to packaging. This can be reduced to around 2 hours or less by reducing the baking time from an average 45 minutes down to 30 minutes and saving up to 2.5 hours on cooling time!

For **continuous** operations using belt ovens the implementation is less simple to do in existing operations, but interesting to look at for greenfield operations. As the average reduction of the baking process is 30%, the physical oven length can be shortened with the same percentage which results in lower investment and energy costs.

No forced cooling (energy) is required, and the bread quality & shelf-life will be better – guaranteed!



For an artisan bakery with 3 batch ovens, working 12 hours per day, by adding one vacuum cooler he can increase his average production by up to 50%, and effectively work around 35% longer each day. This could mean a **doubling of the total production capacity**. Saving on cooling space might also allow to upgrade from 3 to 4 ovens, adding substantial additional capacity. For batch production facilities, it’s relatively easy to integrate one (or multiple) vacuum coolers.

Providing high-quality baked goods is one of the main selling points for bakeries to compete against other bakeries or retail stores. Vacuum conditioning is one possibility to increase the freshness, look and quality of the baked goods.

Also, energy efficiency is becoming more and more important as it can save energy costs and minimize CO₂ emissions. Therefore, it is of high interest for bakeries to reduce the baking time with vacuum cooling and reduce energy costs by avoiding shock freezers.

