

think process!



Werner & Pfleiderer
Bakery Technologies

WP VACUUMCOOLING



We are WP.

We are **WP** Bakery Technologies. For more than 140 years we have been developing technical solutions for bakers. We build, install and maintain baking ovens, machines and production lines for all kinds of bakeries from artisan enterprises to full-scale industrial production lines. Worldwide. MATADOR®, our multi-deck oven, is a legend in bakery technology. Within the **WP BAKERYGROUP** we are the experts for every type of oven and the feeding systems that best work with them, for dough processing lines and for vacuum cooling systems.



We are a company of the **WP BAKERYGROUP**, which means we cover the entire process chain of bakery technology for all purposes ranging from finest artisan to large industrialized production, for fresh and durable baked goods. We are the only supplier in the industry with that all-round capability, making us market leader in the field, worldwide. We produce everything the market needs. Our machine equipment covers everything from dough processing, dough dividing and moulding, baking in multi-deck, rack and tunnel ovens, automated feeding, proofing and frying through to vacuum cooling.



WP Bakery Technologies

We have been working for bakers for a long time, and we're good at it. Our customers use our products all over the world to get best bakery results.

We are always looking for the better solution, better technology, ever better products. We observe the market very closely and know what customers are looking for. Which is why we are constantly looking for new ways, always in close collaboration with our customers. We are highly innovative and always have our eyes on tomorrow's developments – **FutureWork** is our passion.

For more than 140 years we have been developing new and innovative baking technologies – for multi-deck ovens, rack ovens, wood ovens, tunnel ovens, in-store ovens. Our patented brand ovens **MATADOR®**, **ROTOTHERM®**, **UNITHERM®**, **PELLADOR®** and **MEGADOR®** are used day-in, day-out for best results in bakeries all over the world.

We make absolutely sure that our customers' production lines run without interruption, which is what our **ProductionCare** is all about.

>>> like to know more? www.wp-l.de



WP VACUUMCOOLING

The new “vacuum process” cools baked goods faster than all previously known methods. Oven-hot baked goods are cooled in just a few minutes. Long cooling times are a thing of the past. The cooled products are immediately available for further processing:

- Order Picking/Shipping
- Snack Preparation
- Packaging
- Finishing

VACUSPEED® offers huge advantages:

- Your baked goods stay fresh and juicy longer
- Customers love the longer-lasting crispiness
- You can react more precisely to changing consumer trends
- Products are more consistent in size and volume
- You can create new “Ready-to-Eat” products and entire product concepts
- Best before date – BBD – is significantly longer
- Significant time and energy savings in production

VACUSPEED® cells come with a swing or a sliding door to take in a rack trolley. VACUSPEED® cells can be modularly integrated into fully automatic feeding and automation systems of multideck and tunnel ovens.

WP VACUUMCOOLING sets new standards in the production of baked goods.

>>> like to know more? www.wp-l.de/vacuumcooling

* Process times specified are given as examples.
Actual times depend on the specific products and fillings used.

#vacuspeed

VACUSPEED®

the key to cost-effectiveness

Long-lasting crispness and stability of baked goods throughout the day

With its patented technology, the vacuum cell cools the goods quickly and gently. The result is juicy, stable baked goods of the highest quality.

ADVANTAGES

- **juicy, stable best quality baked goods**
- **Quality improvement**
- **longer shelf life**
- **independent of weather conditions >>> longer crispness**
- **stable volume**

Longer best before date

Goods hot from the oven cool *germ-free* within a few minutes in the vacuum cell. The cooling process extends the BBD of refrigerated baked goods by up to 3 weeks. All germs are killed in the vacuum process. Products are packaged germ-free.

ADVANTAGES

- **Extension of BBD by up to 3 weeks**

with VACUSPEED®

without VACUSPEED®



Quick cooling to cutting and packaging temperature

Oven hot goods are cooled in the vacuum cell in a very short time to a low temperature level.

ADVANTAGES

- Time savings in the production process
- Energy cost savings

Greater efficiency and time savings

VACUSPEED® taps into enormous energy savings potential compared to conventional cooling. The time saved is about 70%.

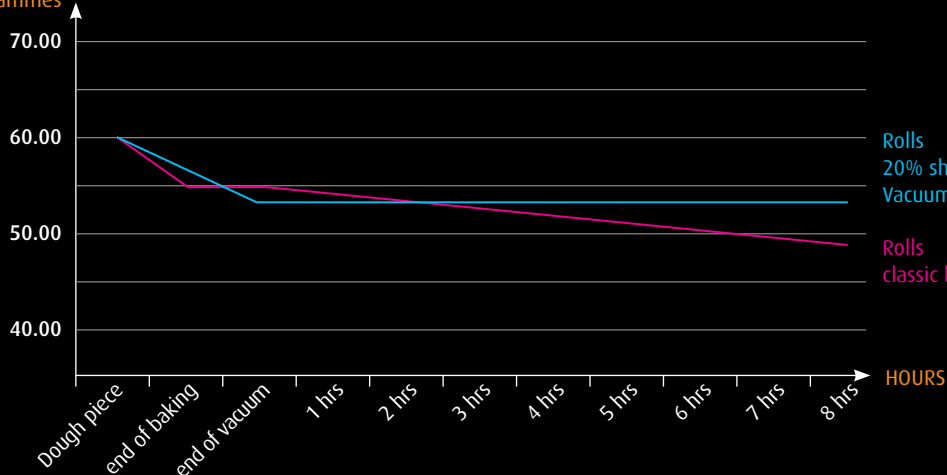
ADVANTAGES

- Storage and transport temperatures of 4-8°C
- reduced energy requirement for crisping up products
- fast fresh products for customers

VACUSPEED® high-performance vacuumcooling

weight (moisture) loss: example rolls

DOUGH/PRODUCT WEIGHT
in grammes



HOURS

WP Bakery Technologies



WP VACUUMCOOLING

This is a new dimension to cooling oven-hot products; baked goods cool faster whilst making significant energy savings. The products have a longer-lasting crispness; they stay stable longer and can be cut immediately. The minimum shelf life of refrigerated goods is extended by up to three weeks.

These four special properties allow more product optimization:

WP RECIRCULATION



WP DIFFERENTIAL PRESSURE MEASUREMENT



WP REMOISTENING



WP COLD AIR CIRCULATION



The 4 special VACUSPEED® properties.



WP DIFFERENTIAL PRESSURE MEASUREMENT . PATENTED

We measure the **internal pressure of the products and the pressure in the cell**. The advantage of this is that the difference in pressure can be adjusted for each specific product.

The measurement takes place via a insertion probe in the middle of the product and a pressure sensor in the chamber.

The result is saved in the recipe programme and stored for repeat runs.



WP COLD AIR CIRCULATION

The patented cold air circulation system is switched on as soon as a pre-set negative pressure is reached in the cell.

This is how the system produces soft, dimensionally stable baked goods.



WP REMOISTENING

Moisture can be added to the product at any time.

Depending on the product, moisture is added at any stage of the process. This allows you to set the crispness of products individually.



WP RECIRCULATION

After reaching the set minimum pressure, germ-free air is fed into the cell via clean-air filters until the normal ambient pressure is reached.

Delivering cooled, germ-free products.

VACUSPEED

WP Bakery

WP

WP

M.Schaber

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WP





WP Bakery Technologies

WP VACUUMCOOLING . artisan

SYSTEM CONFIGURATION

- **WP** Bakery Technologies ROTOTHERM® Green
- **WP** Bakery Technologies VACUSPEED® artisan . with swing door or sliding door

PRODUCTS

up to **10,000** pcs/h (for Type 14,5.10)*

up to **20,000** pcs/h (for Type 26.10)*

VACUSPEED



WP Bakery Technologies

WP VACUUMCOOLING . **industrial**

SYSTEM CONFIGURATION

- **WP** Bakery Technologies MATADOR® MDV
- **WP** Bakery Technologies OBER® PRO II
- **WP** Bakery Technologies VACUSPEED® industry

PRODUCTS

1.5 tons/h*

* Capacity depending on product size and process time

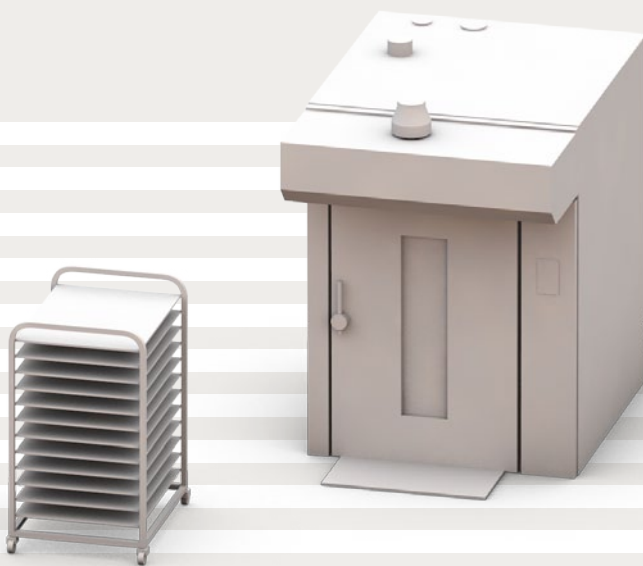


Artisan

WP VACUUMCOOLING

VACUSPEED® artisan

VACUSPEED® vacuum cells from **WP** Bakery Technologies are specially designed to work with rack trolleys. After completion of the baking process in a ROTOTHERM® Green rack oven, for example, the rack trolley is manually pushed into the VACUSPEED® vacuum cell. The products are then quickly cooled immediately after baking. VACUSPEED® vacuum cells are supplied alternatively with internal or external pump stand. The sliding door version offers greater comfort in operations. The operator doesn't need to open or close the door anymore. The sliding door allows greater freedom of movement in front of the unit. In both versions – swing door and sliding door – the door opens automatically as soon as the relevant process time has been reached.



BAKING

WP Bakery Technologies
ROTOTHERM® Green
with rack trolley

VACUUMCOOLING II

WP Bakery Technologies
VACUSPEED®
with sliding door*



VACUUMCOOLING I

WP Bakery Technologies
VACUSPEED®
with swing door*

* with integrated pump stand

Industrial

WP VACUUMCOOLING

VACUSPEED® industry

The fully automated feeding and automation system has a modular design with integrated vacuumcooling. It is equipped with three optimally matched **WP** components and is suitable for a wide variety of system architectures. Multi-deck or tunnel ovens can also be equipped with the OBER® PRO II feeding system and high-efficiency VACUSPEED® cooling. Automatic loading and unloading of the stationary cell body by the OBER® PRO II has several major advantages. The solution avoids expensive and vulnerable mechanics in the vacuum system itself. The products are quickly cooled in the VACUSPEED® vacuum cell immediately after baking.

BAKING

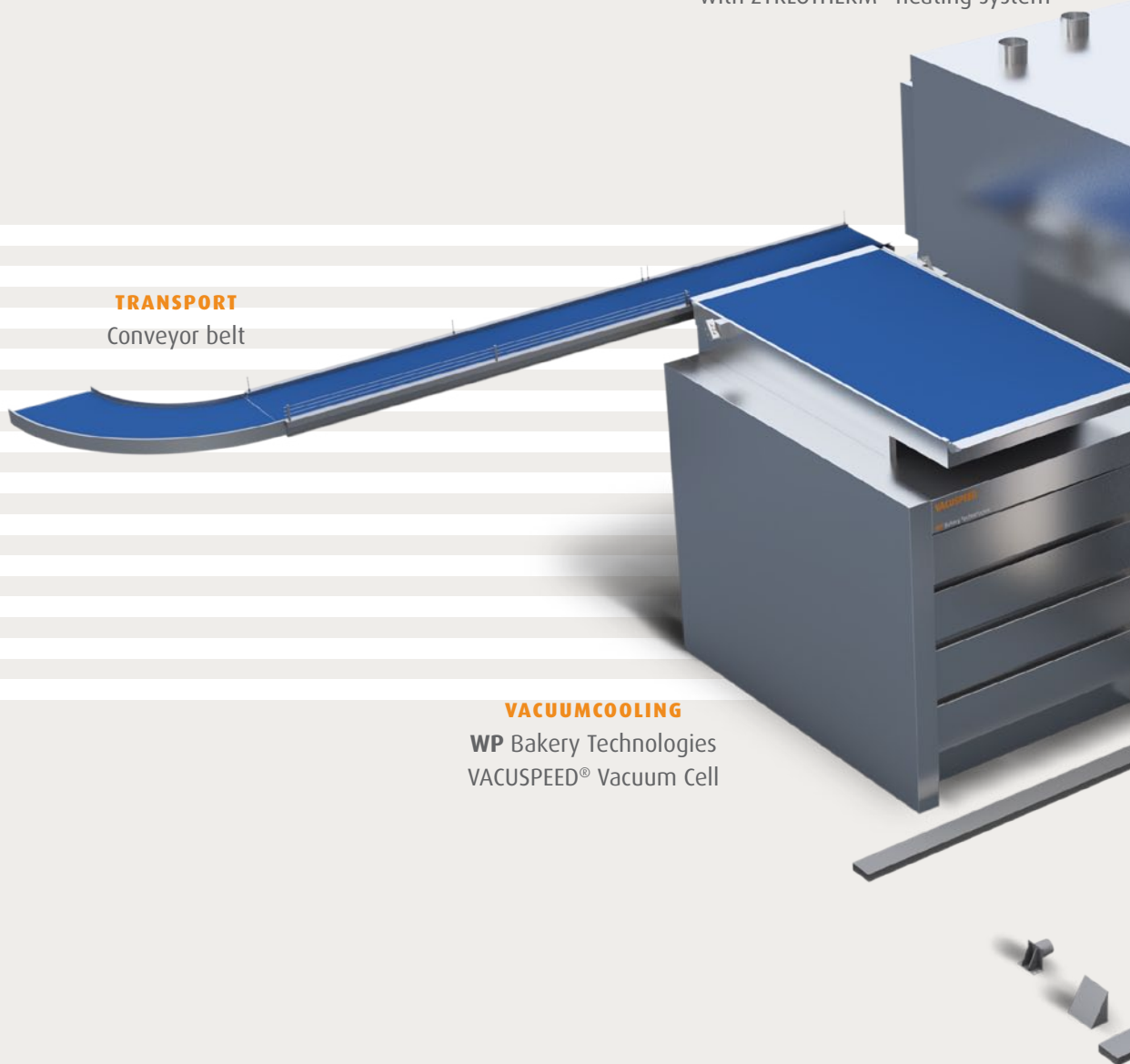
WP Bakery Technologies
MATADOR® MDV
with ZYKLOTHERM® heating system

TRANSPORT

Conveyor belt

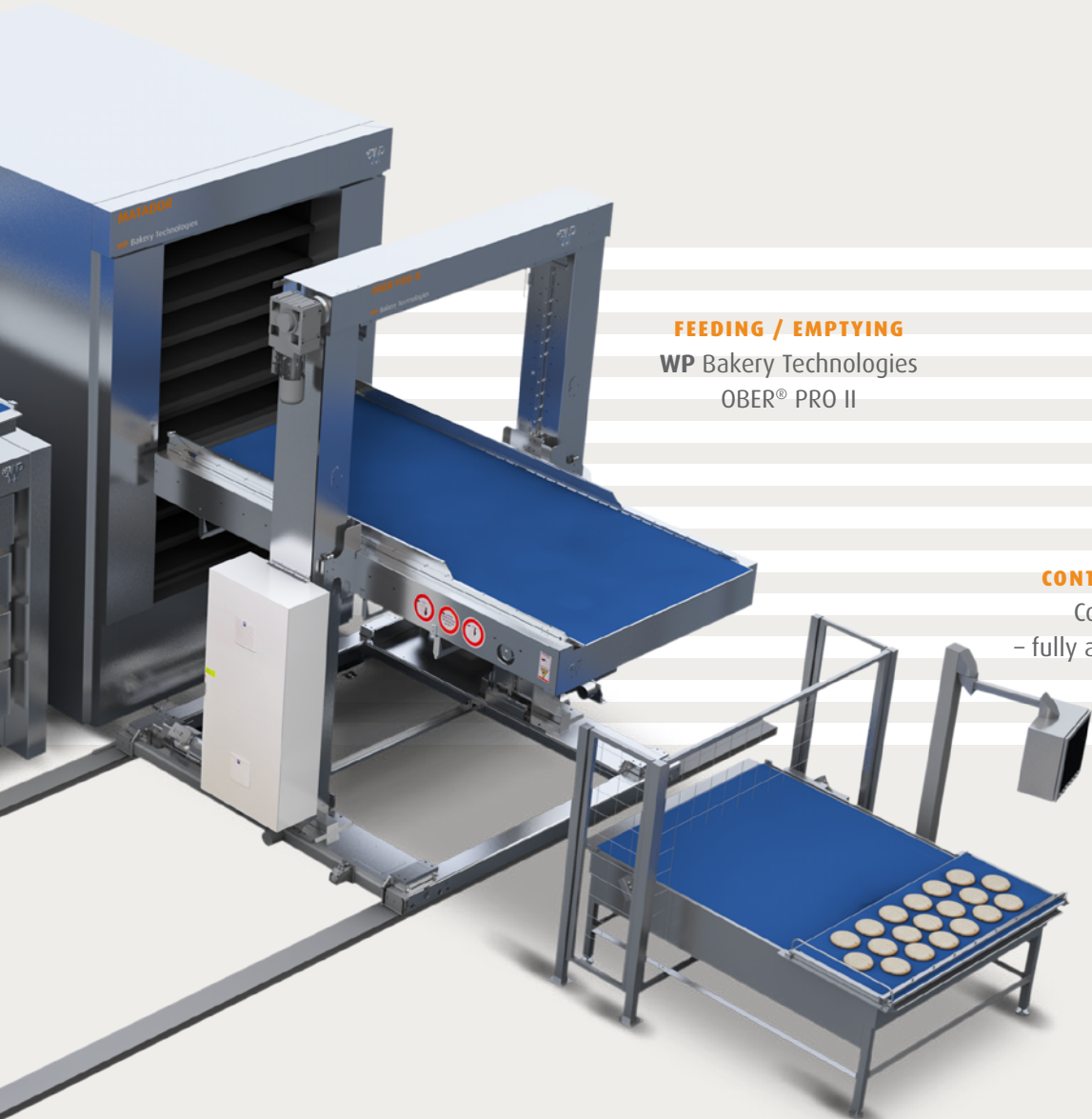
VACUUMCOOLING

WP Bakery Technologies
VACUSPEED® Vacuum Cell



Advantages

- top-quality craftsmanship with proven **WP ZYKLOTHERM®** flagstone oven technology
- integrated, intelligent loading and unloading control
- flexible Product range, 100 % reproducible results
- Rationalisation and easier working conditions with less heavy lifting
- Energy efficiency through optimal, fully automatic process control
- Production reliability with **WP OVEN-CONTROL**, remote diagnostics and **BLUE VALUE**
- Compact modular build takes up less space
- Easy handling
- Optimal capacity utilization of the **OBER®** Line
- 24/7 production of chilled, durable products



FEEDING / EMPTYING

WP Bakery Technologies
OBER® PRO II

CONTROLLING

Controls
- fully automated -



ProductionCare

We at **WP Bakery Technologies** do everything to make sure that our customers' production lines run ... and run ... and run. Perfectly operating service is just a part of the equation – it actually takes more, and that's what we call **ProductionCare**. The baking oven, the machinery, the production line and the overall system are always at the core of our considerations. We check over and over again the functionality and operational reliability of all assemblies and components. Design engineers, technicians, master bakers and service staff are constantly exchanging information and ideas at **WP Bakery Technologies** and on site at our customers. **ProductionCare** means initiating, structuring and organizing feedback processes, intelligently evaluating them and taking the appropriate action wherever necessary.

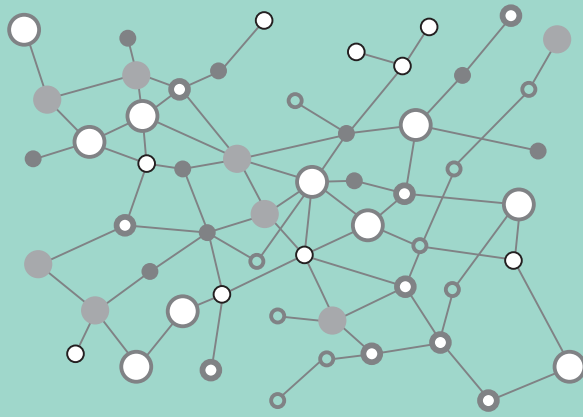
Professional handling of production lines is absolutely key to our customers' success. Our **training offering** covers the full range of qualifications needed. Our master bakers and machine operators train on site at customer locations, at our own Baking Centers and per e-learning. **Learning tools** fully integrated in the controls facilitate the training of new employees.

We offer the full **service** bakeries need to run round the clock: regular maintenance, 24/7-availability, telephone help desk, online analysis of machine data, continuous remote control, monitoring, custom stocking of wearing parts, online ordering 24/7, on-going information service, worldwide network of service stations, personal presence on demand at short notice. Delivered with a smile by highly competent and motivated employees.

WP SERVICE LINE 24 . +49 1805 777 123

>>> like to know more? www.wp-l.de/productioncare





FutureWork

The future always starts right now, and it starts over and over again. That's where we get our drive from and how we understand our mission. A mission we pursue with stringent structure and passion. At **WP Bakery Technologies**, we call it **FutureWork**, our active work on shaping the future – in the Group, together with partners, with universities and in collaboration with research institutions. For ourselves and our customers.

FutureWork, as we understand it, is a forward-looking orientation of all our employees to what the future holds, and it is a central element of our corporate philosophy. For us, **FutureWork** is about motivation, about the drive to find new things, about passion, implementing structured ways of working, closely following market developments, sensing new customer requirements and following up on them, developing new ideas in creative processes, and never compromising on finding the best solution.

We invest extensively in research and development, and we are involved in numerous research projects, especially in future technologies. Industry 4.0 digitalization is an integral part of our developments focused on networking our systems, implementing new sensor technology for controlling machines, and using autonomous systems wherever they make sense.

We like to say, let the future come ... we'll be in the mix!

>>> like to know more? www.wp-l.de/futurework

think process!

WP BAKERYGROUP

 Werner & Pfleiderer
Bakery Technologies

 Werner & Pfleiderer
Industrial Bakery Technologies

 Kemper

 Haton

 Riehle

OUR BRANDS

WP BAKER'S EQUIPMENT

WP PIZZA

WP DONUT

WP ROLL

WP TOAST

WP BAKERY TECHNOLOGIES

von-Raumer-Strasse 8-18
D-91550 Dinkelsbühl
Germany
Phone +49 (0) 98 51-905 0
Fax +49 (0) 98 51-905 8342
info@wp-l.de
www.wp-l.de

www.wpbakerygroup.org