

# Exploring new pathways

MESTERBAKEREN IS NORWAY'S SECOND LARGEST BAKERY GROUP, WITH SALES OF AROUND EUR 120M. IT SUPPLIES EXCLUSIVELY TO THE HARD DISCOUNTER REMA 1000. IT COMMISSIONED ITS EIGHTH PRODUCTION WORKS IN STANGE, NORTH OF OSLO, IN AUTUMN 2011



**++ figure 1**  
VMI supplied the mixers for the two bread lines and a bread roll line; the mixers obtain the raw materials from the outdoor and small ingredient silos



**++ figure 2**  
In future, there will be baked a special range of bread loaves on the two multi-deck stone ovens from Tagliavini for Rema 1000's gourmet range

**+** The markets of the hard discounter REMA 1000, which are located all over Norway, have sourced their baked goods range from the new factory in Stange of the Mesterbakeren AS Company, Stavanger, Norway, since autumn of last year. The delivery area of Mesterbakeren Stange is from north of Oslo to south of Trondheim. As a result the latter's former production site in Brumunddal has now been shut down, and supplies from the group's other works have also either been reduced or even replaced entirely by in-house manufacture. This allows sufficient time when the products leave the oven to be shifted backwards as far as possible, which is beneficial to maintaining freshness in view of the delivery distances of up to 250 km.

Operations Manager Hans Kristian Engen has a total workforce of 45 and three production lines available for the 3-shift operation. The dough makers start work at 08:00, the first HGV leaves the yard shortly after midnight and the last at

around 3:00. The daily product range comprises a total of 22,000 bread loaves and 14,000 bread rolls, the production volume being around 16 t.

Norway's consumers and its consumer politics are both very health-oriented. This is why, except for baguettes, Mesterbakeren bakes all of its varieties from whole-grain flours. Even what counts as toast bread is fibre-enriched. Alternatively, rye flour scarcely plays any role. Mesterbakeren's total consumption at Stange is just about 7–8 % of the total amount of flour, and thus similar in size to the usage of oats, spelt or barley flour. On packs of bread with a particularly high fibre content, this fact is advertised by a special seal stating the percentage of wholemeal products as a proportion of the flour used. A second seal identifies whether the loaves are classified as beneficial to health.

In the production hall, a Mega-Star dough dividing and moulding machine from the BackTech/Rosendahl Company



**++ figure 3**  
The baskets in which the loaves are presented upright in the shop can be stacked together to be taken away



**++ figure 4**  
In Norway the focus is on health-oriented products. The red circle shows the proportion of coarsely milled grains, the green symbol identifies the variety as "healthy"



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++ figure 5

The two bread lines finish with an Alit cooling tower, and both feed onto a shared slicing and packing station

from Pischelsdorf, Austria, is currently predominantly used for the manufacture of various round bread rolls and sweet buns. The newly created capacity of 8,000 items per hour is intended to boost the bread roll business in the 60 REMA 1000 markets supplied from Stange. In the past the dough pieces for this came from the sister factory in Fredrikstad, south of Oslo, and were only baked-off in Brumunddal. ▶

## Norway

The market is divided between the four big groups. Just under 40% belongs to NorgesGruppen (sales in 2009 around EUR 6.1bn) with the discount markets KIWI, KIWI and Bunnpris, Ultra and Centra (self-service department stores), Spar, Eurospar and Meny (supermarkets), Mix (kiosks) and Joker (small food shops). The Rema 1000 discount markets belong to the Reitan Group, which also operates kiosks and convenience stores including 7-Eleven and the UnoX filling stations. Its turnover in 2010, including commissions for phone card top-ups, public transport tickets and lottery games in franchises and branches, was EUR 7.3bn. It is estimated that the market share in food retail is 19.5%. Thus it is virtually on an equal footing with Coop Norge, which with Coop Obs! and Smart Club (self-service department stores), Coop Mega (supermarkets), Coop Prix and Coop Extra (discount markets) and Coop Marked (small food businesses), including specialist electronics markets, achieved sales of EUR 4.1bn in 2010, corresponding to a market share of 19.6%. No. 4 is the ICA Group, an immigrant from Sweden, which operates with the hard discounter RIMI and the supermarket formats UCA maxi and ICA Supermarket. NorgesGruppen took over the "Bakers" industrial bakery from the Orkla Group in 2011, whereas REMA 1000 has an in-house supplier in the shape of Mesterbakeren.

The food retail holds around 80% of the Norwegian bread market. The country has just under 500 family bakeries which, in addition to supplying their own shops, also deliver mainly to hotels and restaurants, as well as supplying supermarkets with specialities for their bake-off stations. The out-of-house business in the baked goods area in Norway is rather modest. It consists of filling stations, convenience shops and partly also the artisan bakeries which offer sandwiches and hot snacks. Traditionally people take home-made sandwiches with them. According to estimates, about 80% of the bread is eaten for breakfast or as sandwiches for breaks. +++

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++ figure 6  
BackTech's bread roll line with offtake onto baking trays and automatic placement of the trays into rack oven trolleys

The Mega-Star, with interchangeable divider compartment bars and the ability to reduce the number of rows by blocking individual divider compartments, produces dough pieces with a piece weight ranging from 25 to 150 g. The dough put into the hopper is fed mostly stress-free into the lightly oiled division compartment, without any rollers or knives that could damage it. No force is applied to the dough until the measuring piston presses it into the measuring compartment. To avoid even this causing any structural damage, a hydraulic pressure balance allows the filling pressure to be adjusted to the required dough structure. The applied pressure in the moulding unit and the moulding speed are also continuously adjustable. The final position of the finished piece of dough after deposition onto the spreader belt is freely definable. The dough divider, just as the intermediate proofer cabinet, seeding unit, automatic draw-off device to load the baking trays and the automatic baking tray stacking in the rack oven trolleys, are controlled via a user-friendly touchscreen. According to Engen, if the business boost succeeds as indications already show, he plans to expand the plant by adding the ability to cut square bread rolls from a dough sheet. After a proofing time of 60–65 min items are baked in the rack oven. Part of the production, the artisan series, is run through delayed proofing units for 14–18 h. Two lines are available for the production of loaves, the second mainstay of the Stange operation. One produces up to 1,200 hearth-baked loaves and the other up to 1,600 pan breads per hour.

Both are supplied by Benier make-up plants consisting of DAM Basic multi-chamber dough dividers, rounders, moulders and pre-proofing cabinets, which in turn receive dough from a total of four VMI spiral mixers. Raw materials are obtained from four outdoor silos and ten small ingredient silos made by Spiromatic.

Incidentally, the first two examples of Benier's new standard pre-proofing cabinet series, whose design focuses mainly on ease of cleaning and maintenance, are in Stange. Their V2A stainless steel panels are installed at an angle of 45° instead of horizontally, so no flour or dust can be deposited on them. Falling flour collects in drawers that are simply pulled out for cleaning. In addition the cabinets offer a flexible, manually selectable pre-proofing time, so changes and/or responses can take place quickly and easily.

Engen brought the continuous oven for pan-baked products with him from the old works in Brumunddal, but for the growing demand for hearth-baked bread there is a new gas-fired Gostol Cyclotherm continuous oven with a baking area of 54 m<sup>2</sup>, which has made itself popular not just as a good bread oven but also because its gas consumption is very economical.

The two bread lines each end with an Alit cooling spiral on which the loaves ride as in a merry-go-round on so-called Spin-Flex belts for up to 70 min before moving onward to a shared-use slicing and packing station. The characteristic feature of Spin-Flex belts is that the bread rests on metal rods carried in plastic links which in turn move on plastic rails. This design avoids any use of lubricating oil whatsoever, and ensures almost heavenly silence. Anyone standing next to the cooling spirals can understand what a person talking to them is saying, even without the latter shouting. This construction allows belt segments of any size to be replaced at any time with a few hand movements.

Some of the hearth-baked breads and most of the pan loaves are packed in sliced form. They are delivered in stacking boxes specially developed for REMA 1000, in which the loaves are presented in the shops in a vertical position, thus eliminating any repacking of the goods in the shop.

With the new production facility in Stange, which is designed for a turnover of EUR 20m, the Mesterbakeren Group has also created the opportunity of developing a new product range of baked goods with which REMA 1000 plans to propel a change of image. In a similar way to that in the existing hard discounter's other product ranges, the "up-market" expansion is intended to attract gourmets and the more well-to-do. To this end, Engen and his colleagues have invested in two Tagliavini stone baking ovens in which experiments are currently underway with bread varieties such as walnut bread etc. They differ from the previous product range not only in the special raw materials but also in their distinctly higher addition of water and longer dough resting and proofing times compared to the dough yields that were previously customary. This is of great interest to Mesterbakeren, particularly because less than 20 % of the REMA-1000 markets are equipped with baking stations, so everything must be delivered fresh and ready-baked. +++

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