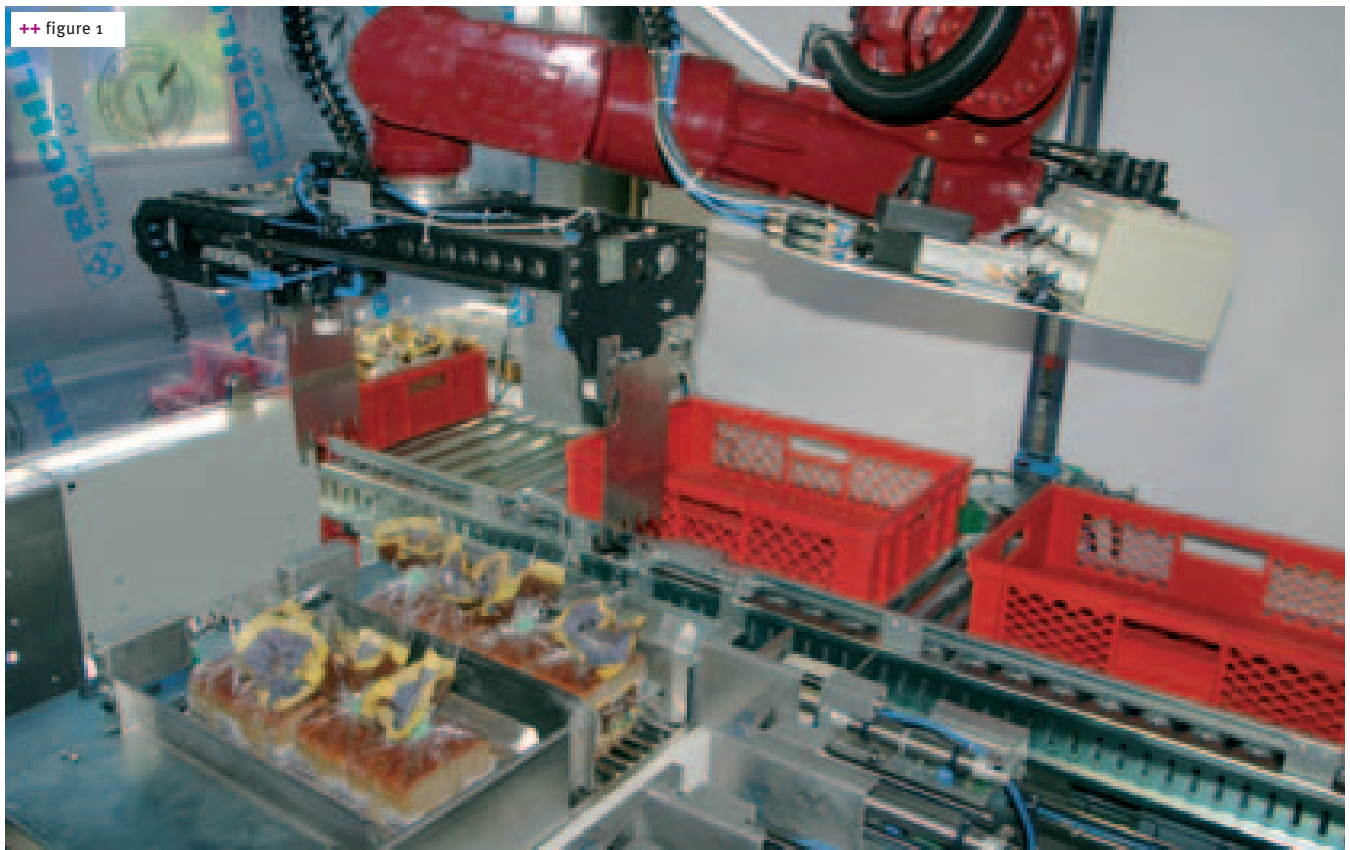


Flexible solutions

NEW PACKAGING ROBOTS OF GERMAN GROUP KOMATEC ARE USED IN A LARGE FACTORY TO PACK BREAD SEVEN DAYS A WEEK IN THREE SHIFTS



++ figure 1

✚ The new factory for Kamps was built in Germany in 2000. A staff of 300 produces 200 t baked goods each day on six lines. The latest investment is the pack robot system TLP15H-SBP supplied by Komatec, Enkenbach-Alsenborn, Germany. The Kamps AG invested about 300,000 Euro in two packaging robots including conveying technology. The company was able to achieve a significant optimization of its packaging processes. “The equipment packs for example in a three-shift operation up to 60 whole meal breads per minute into waiting crates. The weight of the products can vary between 175 and 500 g,” explains Wolfgang Spörle, technical director of the factory.

With this investment, Spörle focused on two parameters: The equipment must be highly flexible to allow fast product change-over and the packing of different baked goods. Furthermore, it must have a small footprint to occupy as little space as possible. These requirements were to be met by Bernd Meckel, managing director of Komatec. The new robot needs only a floor space of 2.5 x 2.5 m because the arm of the robot is installed at the top of the machine. This not only saves space, but also makes the daily cleaning and any maintenance work much easier. The equipment is flexible and easily maneuverable due the 6-axes KUKA robot KR 15 with PLC and Siemens TP 170A touch screen monitor for operation of the equipment.

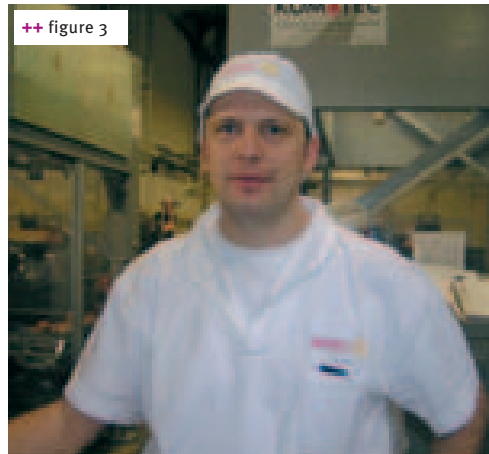
Currently, Kamps uses nine different packaging arrangements, for example 3x4 packs with 500 g traditional bread each, 14 packs with 500 g pan bread each, or 18 packs of pan bread where the individual packs are to be placed in an interlacing order into the crates (see small images below).

The program can be expanded without any problems so that Kamps is well prepared for the future. “Flexibility of the equipment is very important to our customers. In case the food retailers require e.g. a new packaging size or a new





++ figure 2



++ figure 3

++ figure 1
The position measurement system in the gripper does not contain any mechanical wearing parts

++ figure 2
The packaging robot handles up to 60 packs of bread each minute

++ figure 3
Francesco Calvano monitors the packaging processes at Kamps

++ Small images (left page)
Broad range of arrangements for unmoulded and pan bread possible

product, the equipment can be easily adjusted to the new format,” explains Meckel.

Robots in operation

Before the robot places the packed bread into the transport crates, the packs are set up in the grouping station. The closures can be aligned pointing upwards or to the side, depending on the requirement. A patented grouping and gripping system makes sure that only one hand wheel is needed to adjust the

grouping arrangement. “A change of products is possible within two minutes,” explains packaging manager Fransceco Calvano. Furthermore, the grippers with their position management and adjustable gripping strength are suitable for very soft products such as bread coming fresh from the oven.

Komtec develops and manufactures packaging robots and also pallet transport systems, control systems, and transport systems for packaged goods in bags, packs and containers. +++

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