

### From grain to bread

## Ingredient handling from one provider

The efficient and precise provision of raw materials is crucial for the quality of the end products in industrial bakeries. Our customers benefit from our many years of expertise in all process stages.

#### **Advantages**

- Expertise from grain to bread
- Everything from one provider: Process technology, control, and service
- 24/7 service availability right nearby
- One line conveying for maximum product safety and high throughput capacity
- Cutting-edge sponge dough technology



**Material intake** 

Intake and storage



#### Intake and storage

Bühler offers solutions for maximum food safety. From safe intake to hygienic storage of all components. Optional sensor technology allows for real time registration of product characteristics. The silos and discharge technology ensure sanitary storage and discharge according to the "first in first out" principle.



#### **Dosing and weighing**

The super-modern dosing and weighing systems provide precise weighing, individual dosing parameters for each product, and reliable functioning. The compact design of our storage and weighing systems combines high capacity and the most stringent standard of sanitation, and can be customized according to the customer's needs.



Dosing and weighing

Transportation

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#### Liquids

Our portfolio includes the processing of all common liquids used in the food industry. This comprises all fluid and viscous components such as yeast, oils, liquid egg, or sugar syrup. Moreover, Bühler has established itself in the field of sponge dough. The JetMix hydration and sponge dough module enables the production of the highest quality doughs.



### **Dough preparation**

To achieve the optimum dough temperature, our WinCos® recipe control calculates the correct water temperature and "takes into account the energy" input in the kneader as well as the resting time for the dough. The result is a dough of consistent quality in accordance with the recipe, which has the optimum characteristics for further processing.

# Innovative overall process

# For dry and liquid components

Based on knowledge and experience from the food industry, Bühler has developed a new complete solution for processing and transporting all ingredients for baked goods from the silo to the kneader. The process is directed to the central requirements of modern bakeries and gives them a decisive economic and technical advantage.

With Bühler solutions, bakery customers benefit from a consistent, quick, and clean process. The provision of flour, medium and small components is improved decisively through the "one line conveying" principle.

#### More efficient transportation

On the way from the flour silos to the kneader, the medium and small components are added continuously to the basic flours. The precise weighing and dosing is carried out via the central control, which also displays and monitors the addition of manual ingredients.

#### Advantages:

- Optimal transportation in terms of energy efficiency for the sometimes sticky and difficult to transport small components along the "flour flow".
- A controlled and addition-free flour flow in the end of each batch ensures the sanitary cleaning of the pipes.
  This ensures that the plant is ready for the next mix straight away.
- The pre-mixing of the various components on the way to the kneader leads to a beneficial homogenization and tends to shorten the kneading times.

#### Innovative sponge dough process

Numerous recipes for baked goods include natural sponge doughs as substitutes for baking agents. The innovative Bühler sponge dough process with JetMix enables the production of high quality dough with top sanitation. The system not only ensures plastic doughs with good machine runability but also enables optimal temperature management.

#### Integrated cleaning

The "cleaning in place" (CIP) process adapted by Bühler for the bakery industry is an integrated component of all plants that process liquid recipe components. The CIP application ensures safe, efficient, and cost-optimized cleaning processes that can be reproduced without being influenced by personnel. With the recording of data, it is possible to document the cleaning processes at any time and integrate them into the existing quality management system.





### Automation & service

### For optimal plant availability

Our customers benefit from our integrated process solutions and enjoy absolute certainty thanks to the reliable process control and our global service organization.

#### Reliable process control

WinCos® simplifies your work routine

Our clever production management system controls and monitors your processes. It stands out thanks to:

- Clear process visualization and an intuitive graphic user interface
- Full traceability
- Complete plant control at every operating station
- Simple connection to ERP systems
- Integration of recipe parameters for subsequent process stages
- Immediate access to key performance indicators (KPI) such as analysis of downtime or energy management
- Individual log-in data and user rights

#### **Trouble-free operation**

All-round support for your plant

Our service portfolio ensures that your machines and plants function efficiently and fault-free at all times. Our customer service includes:

- 24/7 support
- Plant checking and optimization
- Calibration of scales
- Software updates and data cleaning
- Energy optimization
- Customized trainings for process equipment and automation

### **Bakery Innovation Center**

Competence from grain to bread

At the Bakery Innovation Center (BIC) we enable our customers to benefit from our experience. Whether it is product developments or training – use our knowledge and our infrastructure for your projects and the added value of your products.



