System solutions for enrobing, tempering and cooling.
Top form for top sellers.
Finishing of chocolates, confectionery and cookies.

Meeting consumer’s preferences with branded goods in the field of sweets and confectionery is a challenge for the product development. New ideas require new process technology. Enrobing, decorating, tempering, cooling – Bühler delivers total plant solutions for the finishing of confectionery and cookies to premium products.

If you are planning to finish new product ideas into unrivalled branded items, you can find convincing solutions at Bühler cooling and enrobing technology. Hygienic machinery design, high efficiency with low operational costs resulting in a predictable amortization is the focus with Bühler Countlines. The process-oriented adaptation of the system to your individual specifications is the absolute norm.

The production of chocolates, confectioneries or fine cookies is the high art of confectionery production. Coatings, decorations or bases of chocolate, nougat or caramel masses not only require professionalism in the development of the recipes, they also require technical solutions which ensure consistent quality, flexibility, efficiency and reliability in 3-shift fully automatic operation.

Enrobing, tempering, cooling
Bühler specializes in machinery and system technology for the production and finishing of chocolates, confectionery and cookies.
Essentially, it is a question of the perfect mix of performance and adaptability, meeting hygienic, ecological and economic standards as well as the sustainability of the installed systems. In short:

- Perfect production quality with high output.
- Adaptation to spatial and climatic conditions.
- Hygienic design.
- Energy efficient green design.
- Economical operating costs.
- Flexibility for diverse product ideas.
- And finally: an experienced partner for installation.

The Bühler range includes tempering systems, enrobing systems, decorators and cooling tunnels which can be flexibly adapted to any product concept, mass recipe or production process. The experienced Bühler team effectively equips major companies in the confectionery and baked goods sectors with cooling and enrobing technology formerly known under the brand name Kreuter.

Bühler enrobing and cooling technology:

- Enrobing machines and decorators for diverse product finishing.
- Tempering machines for process-oriented, prepared enrobing masses.
- Cooling tunnels for confectioneries and cookies of all types.
- Plant technologies with high quality components and an integrated processing technology.
- Unique comprehensive hygienic design.
- The highest energy efficiency.
Innovative solutions along the value-chain. Leading process technology for premium products.

Enrobing
Chocolate or compound coatings, single-colored, two-colored and so on – the wishes and recipes are varied which are brought to attention as production demand on a high level. Bühler enrobing machines for chocolate, compounds and caramel are designed for flexibility, reliability and hygiene. They demonstrate their performance through their high volume output combined with precise reproducibility of masses, weights and decorations. Consistent hygienic design not only ensures compliance with all standards but also easy access to cleaning and service.

Tempering
The secret to fine surfaces: For a perfect coating, the chocolate must first be exactly tempered. The perfection of Bühler tempering machines is demonstrated in handling a variety of masses while stringently complying with clearly defined crystallization points. Fulfilling its main task the tempering machine conveys chocolates and other masses to the respective consumer units in the best processing possible.
### Bühler enrobing and cooling technology:

**Enrobing:**  • ChoCoat™  • IceCoat™ for icecream  • CaraCoat™  • Bottomer.
**Tempering:**  • TMK  • BetaMat™  • Compact tempering machine  • Compound Conditioner.
**Cooling:**  • HKK  • HUKK  • UKK  • BKK.
**Decorating:**  • Integrated decorator  • Servo decorator CW  • Touch decorator  • Decorating table.

### Cooling

Enrobed products like confectioneries, chocolates and cookies are extremely sensitive to changing temperatures. They not only melt easily when warm, they also cool quickly under drafty conditions. Bühler cooling tunnels are thus built by specialists with vast experience in dealing with specialties and reliable controlled cooling technology. For being the highest energy consumers in the production process, the cooling tunnels are equipped with effective thermal insulation, excellent sealing, and in addition intelligent control systems.

### Decorating

Usually it is the small but exquisite details that are the crowning achievement of an impressive product idea. Bühler highlights this fact with innovative solutions for decorating or finishing products that distinguish themselves through originality on the one hand and the ability to adapt and integrate to existing manufacturing processes on the other.
High-class enrobing technology.
With consistent hygienic design.

Bühler enrobing machines for chocolate, compounds and caramel are designed for flexibility, reliability and hygiene. They demonstrate their performance through their high volume output combined with precise reproducibility of masses, weights and decorations. They prove their flexibility for the most varied products with great adaptability. Consistent hygienic design not only ensures compliance with all standards but also easy access to cleaning and service.

Recently, the demand for real hygienic design (HD) has grown louder. Critical evaluations of the food production not only strain individual manufacturers but also entire branches. To gain and keep the trust of the consumers long-term, it is necessary to operate plants which are hygienic while being economical.

Bühler provides a comprehensive, all-inclusive enrobing program with hygienic design according to the guidelines of the leading food associations EHEDG and GMA. This program proofs the ability how to find a perfect solution without comprising flexibility, productivity or safety.

Bühler Countlines equips the confectionery and bakery industry worldwide with plant sizes between 420 mm and 2,070 mm standard – bottom and full-enrobing machines for all masses. Experience for yourself how Bühler can help you meet your product challenges at which precision with their enrobing machines. In the process, your individual requirements, for example, for the overall design, the production quality or economic aspects as well as easy operation with low retooling times, are to be met. This collaboration generates sustainable solutions which can even be carried out in special designs upon request.

Hygienic design by Bühler:
• Consistent hygienic design according to EHEDG and GMA.
• Minimization of the number of components for easy dismantling, virtually without tools.
• General avoidance of product accumulation.
• Systematic, time-saving cleaning process possible.
• Certified food-grade materials and surfaces.
• Maintenance-compatible access to all components; machine parts are moveable for cleaning in the COP area.
• Prevention of surfaces where solids or liquids accumulate.
• Exclusion of cavities or recesses.
• Stock removal of components into separate energy blocks outside of the product area.

Customized enrobing
Bühler enrobing machines finish bars, waffles, chocolates and cookies into an incomparable and lasting brand experience.
**Bühler enrobing machines:**

- Bottom and full-enrobing machines for all masses (incl. highly viscous masses), 1 and 2 color machines.
- Plant sizes 420 mm to 2,070 mm standard.
- Smooth, perfect coat and uniform weight across the entire working width.
- Precise machine tempering for the highest product quality.
- PLC control with integrated recipe management.
- Integration of decorators.
- Swivel-mounted feeding table for easy access.
- Turning units.
- Bottom stripping devices.
- Wire mesh holding down device for lightweight products.
- Bridging belt for line-integrated enrobing machines for the conveyance of unenrobed products.
Tempering of various masses.
Perfect condition – perfect processing.

The secret to fine surfaces: For a perfect coating, the chocolate must first be exactly tempered. The perfection of Bühler tempering machines is demonstrated in the handling of masses with high viscosity while stringently complying with clearly defined crystallization points. They reproduce your top quality with consistency under changing climatic conditions or complicated factors.

In the pre-crystallization of chocolate masses, two tempering machines function according to the principle of screw tempering which is distinguished by high precision and reliability in the processing. Both machines, BetaMat™ and TMK are designed so that even masses with chopped nuts or cereal can be processed.

The main task of the tempering machine is to convey chocolates and other masses to the respective consumer units in the best processing possible. For this, the masses flow through the vibration screen, into the tank, through the decrystallizer as well as through the tempering process with cooling and warming stages before finally reaching the consumer point via the tempered pipeline system. Several independent and closed water cycles ensure reliable tempering results.

The working principle of the Bühler Compound Conditioner is based on a two zone scraped surface heat exchanger. While the first zone can be for heating or cooling, the standard use is to take compound mass from the use tank and heat it to a uniform temperature until completely melted. As the compound exits the first zone, the second zone cools the compound to the uniform correct temperature at which it will form crystals. This is similar to the tempering process used in „Real“ Chocolate. The compound is then transferred directly to the enrober for use.

Benefits resulting from conditioning:
• The formation of crystals, which can add a certain shine to the coating to give it a more chocolate look.
• Time and energy savings due to the cooler temperature at which the compound is transferred to the enrober.

Various size units handle production capacities ranging from 100 kg/h to 2,000 kg/h. The units are supplied with their own closed loop water circuits (one for each zone). The only utility requirement for cooling water to each of these loops is power.

The new hygienic design (HD) gives improved access for maintenance purposes and also allows the unit to be easily disassembled for a basic wash down up to a complete allergen type cleaning.

Process-optimization by Bühler:
• Process-integrated mass processing.
• Expansion of the mass and recipe variety.
• Acceleration of the processes.
• Assurance of productivity and reliability.
• Reduction of operating costs.
• Improvement of the production flexibility.
• Intelligent process automation.

Appearance, quality and flexibility
From the recipe to the production – Bühler shows what makes the difference: shiny appearance of coated products.
Bühler tempering machines and conditioners:

- Standard compact tempering machines and compound conditioners.
- Throughputs from 100 kg/h to 2,000 kg/h.
- Perfect pre-crystallized enrobing masses.
- Suitable for highly viscous masses.
- Coating masses with inclusions possible.
- Integrated screw and crystallizers, screw warmers and cool water generator available. For the tempering machine, buffer tanks with chocolate pump are available.
- Quick and efficient mass exchange.
- Easy clean design results in quicker cleaning and change overs.
- Compact, space saving design.
Cooling technology for the finest quality. Exceptionally convincing.

Enrobbed products like confectioneries, chocolates and cookies are extremely sensitive to changing temperatures. They not only melt easily when warm, they also cool quickly under drafty conditions. Bühler cooling tunnels are thus built by specialists with vast experience in dealing with specialties and reliable controlled cooling technology.

Whether it is a matter of gentle cooling of chocolate masses or the quick cooling of formed or baked products – Bühler cooling technology is suited to the most varied purposes. Bühler always offers the individually customized cooling tunnel.

The universal cooling tunnels UKK and BKK cool the chocolate coatings of refined confectioneries in a gentle way to attain the exact crystallization. Delicate cookie types and extrusion-formed masses are impressively cooled using time-saving and efficient cooling. The high performance cooling tunnel HKK offers the highly efficient and quick cooling of products in the smallest space. This makes it ideal for the cooling of hot products directly after an oven or a mold press in order to prepare them as quickly as possible for cutting, enrobing or packaging. Perfect cooling transfer brings about high efficiency.

Adaptations to special customer demands, the integration of refrigeration or glycol units as well as continuous technological further development belong to the daily routine.

Cooling tunnels are one of the biggest energy consumers in the production process. In view of marked energy saving and efficiency, Bühler has equipped the cooling tunnels with effective thermal insulation and excellent sealing for years and can thus prevent thermal bridging. In addition intelligent control systems with high temperature sensitivity only use as much energy in the plant as is actually needed for the desired result. All these details keep operating costs under control and make all the difference.

Energy efficiency by Bühler:
- Unrivalled insulation strength.
- Long-lasting operating times through a stable design and materials.
- Thermal bridging-free model as an option.
- Heat exchanger from the technology leader with efficient energy utilization.
- Intelligent ventilation control for energy savings.
- Excellent energy efficiency through temperature-sensitive cooling generation technology.
- Highly efficient air flow to prevent pressure losses.
- Low friction drives for low wear and tear and energy saving conveyance distances.

Cooling in a broad range
Efficient cooling of masses and coatings for special quality results.
Bühler cooling tunnels:
- High performance, floor and universal cooling tunnels.
- Belt widths 420 mm to 2,070 mm standard.
- Highly efficient product cooling tunnels convection and floor contact cooling.
- Gentle radiation cooling of chocolate masses.
- Hygienic designs for the highest hygiene standards and uncomplicated cleaning.
- Integrated continuous belt washing units.
- Belt control for perfect product conveyance.
- Bridging units for upstream machines.
- Heating register for reducing relative humidity.
- Modular design for maximum flexibility.
- Two-sided opening for easy cleaning.
- Droplet separator.
- Integrated air filter up to filter category F9.
- UV lamps for microbial load.