Your Pump Solution for the Baking and Confectionery Industry.
Conveying sweet success.

From bread rolls to stollen dough, chewy sweets to caramel bars – several thousand different substances of varying viscosities need conveying every day. This wide variety of products all have one thing in common – high quality and safety requirements must be met during transfer in the production process. To protect consumers, producers must comply with an array of statutory provisions and guidelines that place high demands on the conveying technology used. Accordingly, the pumps need to achieve optimum performance in respect of gentle transfer, product quality and hygiene on a daily basis.

Reliability of the production process and ease of maintenance of the plant components used are top priorities for operators. In large-scale operations, production usually takes place round the clock, with no allowance made for downtime. That poses a real challenge for conveying technology in general, and specifically for progressive cavity pumps.

As an international leading provider of products and pumping services, seepex makes a valuable contribution to the production process. We enjoy responding to this challenge in the food industry using state-of-the-art technology, while taking strict hygiene guidelines into consideration and guaranteeing reliability as well as easy maintenance.

The modular system, consisting of 8 product groups and 27 ranges, allows us to offer the optimal technical and economical solution for any application. For example, customized pumping solutions for use in the production of bread and pastry, the conveyance of frozen products such as pizza dough, and for dough, dumpling and strudel delicacies. Each pump is selected to the specific requirements of your industry, your company, your site, your application. Even highly viscous substances with a high solids content and product mixtures can be conveyed without difficulty.

This is ensured by 370 of the over 630 employees worldwide who work for seepex in Bottrop. They develop, manufacture and market customized pumping solutions – whether progressive cavity pumps, macerators, control systems or our service programs.

Our pumps offer maximum reliability, which can also be augmented with our comprehensive range of service for all stages of the life of a pump. This allows us to provide not only technically but also economically optimal solutions for a wide range of applications.

Our pumps for the for the baking and confectionery industry are certified according to the American “3-A Sanitary Standards Inc.” This association establishes internationally recognized regulations concerning the construction, material properties and application of machines and equipment designed for use in the different areas of the food industry. FDA-compliant materials can also be used for specific applications.

In addition, seepex actively support the “European Hygienic Engineering & Design Group” (EHEDG), whose goals with respect to hygiene-compliant design are similar to those of the American 3-A association. Both these associations aim to develop guidelines and test methods to ensure against contamination. EHEDG certification also plays a supporting role for the legislator and standardisation groups such as CEN and ISO. In line with the cleaning requirements of many production processes, our conveying solutions are also CIP and SIP-compliant.

No wonder it is hard to imagine the baking and confectionery industry without our pumps.

Our sanitary pumps are certified according to “3-A Sanitary Standards” (USA) and designed based on the “EHEDG” guidelines.
Two of five seepex BTCS 5-12 range pumps for conveying margarine – fitted with a heating installation in the double-walled hopper. They transport the liquefied blocks to the next stage, where they are added to the dough.
Pumping solutions for the baking industry.

**Dough and dough masses**
Dough is one of the oldest foodstuffs produced by humans. It normally consists of a mixture of water or milk and flour, combined with other ingredients such as sugar, salt, yeast and animal or vegetable fat.

The dough reacts sensitively to external influencing factors such as temperature changes and oxygen, so it is important that these are kept as constant as possible or eliminated. The same is true of liquid or thick flowable dough masses such as sponge cake or pancake batters.

Our pumps of product group CS are ideally suited to conveying the various types of dough. Their gentle and low pulsation operation makes them ideal for handling the highly sensitive products. Even solids contained in the dough, such as raisins or nuts, can be conveyed largely non-destructively. Highly viscous dough such as gingerbread dough is conveyed using progressive cavity pumps in hopper design with an integrated screw conveyor.

**Ingredients, glazes and fillings**
Another example of use is the conveying or dosing of ingredients, fillings and glazes. Our metering pumps are able to convey exact quantities of these substances, virtually pulsation free, into or onto the particular bakery product. Examples of this include coating pizzas with sauces and filling pastries with vegetable and meat pulp. For hygiene reasons, special pump technology must be used for processing ingredients such as egg and dairy products. Here too, our CS pumps meet the requirements in relation to hygiene and surface grade thanks to detailed technical solutions that allow for simple and residue-free cleaning.

**Applications**
(see flow chart on next page, above)
1. BTCS range pumps transport dough from the tote bin to the supply tank

(see flow chart on next page, below)
1. BCSO range pumps transport glazes or fillings to the dosing station
2. MD range pumps, integrated into a supply tank, for dosing glazes or fillings

**Features**
- Pumping of shear sensitive substances with low pulsation
- Precise dosing of very small quantities
- Pumping of highly viscous, sticky products
- Products with solids can be conveyed gently without damage
- Simple and quick cleaning
- Hygienic closed system
- Increased operational safety, no lifting required

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**Pump of range BCSO 17-12**
Conveying product: Cream filling
Conveying capacity: 8 m³/h (35 GPM) • Pressure: 8 bar (116 PSI)
Temperature: 20 °C (68 °F)

**Pump of range BT 35-12 and hopper lifting device**
Conveying product: Gingerbread dough
Conveying capacity: max. 2 m³/h (8.8 GPM) • Pressure: 10 bar (145 PSI)
Temperature: 20 °C (68 °F)
Flow chart based on the transfer of dough into a supply tank

Flow chart based on the dosing of fillings and glazes

Pump of range BCSB 5-12
Conveying product: Leaven
Conveying capacity: 3 m³/h (13 GPM) • Pressure: 12 bar (174 PSI)
Temperature: 20 °C (68 °F)

Pump of range BEK 1-12 (semi-submersible pump)
Conveying product: Pastry filling
Conveying capacity: 600 l/h (2.6 GPM) • Pressure: 2 bar (29 PSI)
Temperature: max. 40 °C (104 °F)
Pumping solutions for other applications.

Confectionery
Typical products conveyed by our pumps in the confectionery industry include shear sensitive, often sticky products such as cocoa and chocolate products, raw pastes for manufacturing fruit gums, chewing gum, and ice cream. Often, the challenge here is to maintain a constant product temperature to guarantee flowability and prevent blockages. Our specially design pumps with heated or cooled casing parts are able to guarantee this effectively.

Oils and fats
Oils and fats are important ingredients – and not only for manufacturing bakery products. In the production of deep-fried pastries and fried foods, a significant amount of the fat is absorbed by the raw dough, which means that the fryer needs to be refilled continuously. Our pumps can perform this task reliably and fully automatically. If blocks of fat are used, they can be liquefied in a special pump with heated casing parts. There is no need for additional melting apparatus.

The industrial preparation of puff pastries such as croissants requires the continuous application of an even fat film to the pastry base on the conveyor. Our pumps are ideally suited to the task of conveying the fat – pulsation free and without air pockets.

Due to their specific pumping properties, our progressive cavity pumps are successfully used in other areas of the food industry as well. You will therefore not only find seepex conveying solutions in production processes but also in the area of waste disposal.

Thanks to our pump module system and numerous different material combinations, the ideal pump can be made to suit your individual requirements, from both a technical and an economical point of view. This guarantees top performance, reliable processes and lowest life cycle costs.

In addition to this brochure, please also see our other printed material for the beverage industry, the dairy industry and for the handling of waste from the food and beverage industry.
Pumping solutions at a glance.

seepex pumps transport low to high-viscosity products with and without solids and low and high-temperature products, gently, with low pulsations and low shear action. Other outstanding features include excellent metering accuracy and the ability to pump media such as highly viscous and sticky products without difficulty.

Food pumps of product group CS meet the highest standards with respect to gentle conveyance, hygiene and cleaning. Thanks to their open joints and casing parts designed according to the principles of “hygienic design”, they can be cleaned leaving virtually no residue and in accordance with CIP. Consequently, there is no opportunity for bacterial colonies to develop. The pumps are certified according to the high requirements of 3-A Sanitary Standards (USA) and designed based on EHEDG guidelines.

The BCSB range pumps differ from the BCSO range in the design of the joints. The established closed and wear-resistant pin joints from our BN/NS range are used in the BCSB range. They are suitable for use with abrasive conveying products and high operating pressures.

- Conveying capacity: 30 l/h–130 m³/h (0.13–575 GPM), Pressure: up to 24 bar (360 PSI)

The BTCS range features a feed hopper with a cylindrical/conical compression zone. Highly viscous conveying products with a low flowability are conveyed to the rotor and stator conveying elements using the auger feed screw on the coupling rod. Optimal filling of the conveying chambers is achieved by the primary pressure generated in the compression zone. The pumps feature either open, easy maintenance joints, or the established closed pin joints.

- Conveying capacity: 30 l/h–130 m³/h (0.13–575 GPM), Pressure: up to 24 bar (360 PSI)

Metering pumps of product group D are used for conveying and precisely dosing small quantities. They are especially suited to the low pulsation conveyance of low to highly viscous media, and media containing solids. Highest metering accuracy is guaranteed. The MDC range, which features open joints and casings designed according to the principles of “hygienic design”, is designed to meet the highest hygiene standards. Consequently, there is no opportunity for bacterial colonies to develop.

- Conveying capacity: 0.2 l/h–1,000 l/h (up to 380 GPH), Pressure: up to 24 bar (360 PSI)

See our “Product groups and ranges” brochure for further solutions for a wide range of applications.
And what can we get flowing for you? Your nearest contact:

Or visit www.seepex.com