

**seepex.com**  
all things flow



Your Pump Solution  
for the Beverage Industry.



# Technical selection.



Today billions of litres of beverages are produced, transferred and metered into bottles or cans worldwide – and the millions of people who drink them fully trust in their quality. The beverage industry with its juices, beers, wines, and spirits poses diverse challenges to conveying technologies in general and progressive cavity pumps in particular. Technologies that are geared towards efficiency and quality are key.

As a leading international provider of pumps and pumping services, seepex enjoys responding to this challenge with state-of-the-art equipment and a full range of services. All the while, strict hygienic guidelines are met and great reliability with easy maintenance is guaranteed.

The modular construction system, consisting of 8 product groups and 27 ranges, allows us to optimize technology into an economical solution for any application. These include customized solutions for fruit and vegetable processing, for breweries and distilleries or for the wine industry. Our solutions meet the challenge of numerous application areas, including waste disposal in the food and beverage industries.

This is ensured by 400 of the over 700 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 services at all stages during 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 beverage industry are certified according to the American “3-A Sanitary Standards”. This joint manufacturers’ and regulators’ association has established internationally recognized specifications concerning the construction, materials and design of equipment designed for use in the dairy and food industry. FDA-compliant materials which are suited to the specific application can be used for this.

In addition, seepex actively supports the “European Hygienic Engineering & Design Group” (EHEDG) whose goals with respect to hygiene-compliant design are similar to those of 3-A. Both these associations jointly aim to develop guidelines and test methods to ensure against contamination. The certification by EHEDG, in turn, supports legislation and standardization groups such as CEN and ISO. As a result, each pump is selected to the specific requirements of your industry, your company, your site and, of course, to your application.

No wonder it is hard to imagine the beverage industry without our pumps.



**Our sanitary pumps are certified according to “3-A Sanitary Standards” (USA) and designed based on the “EHEDG” guidelines.**

A model BCSO 17-12 seepex pump conveys dessert pudding to a heat exchanger for sterilization, and then fills it into cups. The pump is installed vertically to save space. Compared to conventional stators, the equal wall stator used offers advantages with respect to pressure, cleaning and space.



#### **Fruit and vegetable processing**

Including pumping of:

- Apples
- Cabbage
- Carrots
- Cherries
- Currants
- Lettuce
- Onions
- Pears
- Potatoes
- Tomatoes

#### **Breweries and distilleries**

Including pumping of:

- Beer draft
- Grain-water mixture
- Hops extract
- Kieselguhr (diatomaceous earth)
- Unfiltered wort
- Wort
- Yeast

#### **Wine industry**

Including pumping of:

- Lees
- Mash
- Must
- Pomace
- Sediment
- Wine



# Pumping solutions for fruit and vegetable juice production.

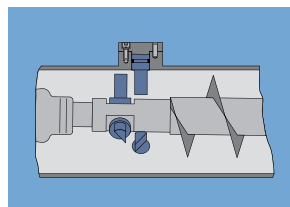


Fruit and vegetable juices should not only be healthy and contain as many vitamins as possible, but also taste and look good. This requires pumping apples, apricots, pears, strawberries, currants, cherries, carrots, tomatoes, onions and many more as gently as possible. The high-quality standards of the end product require sealed systems that will not raise the natural air content of the product to be processed, while generating a tight grain size range.

Our pumps of the BTM range represent a patented concept for milling and pumping fruit and vegetables. These are chopped with a patented cutting device that is fast and hygienic. Then the product is pumped to the subsequent process stages within a closed system with minimal oxygen exposure.

Our BCSB and BN ranges are particularly suited for pumping small fruit such as berries. In these cases the special design of the rotor and the stator, the two conveying elements, ensure transport of the whole fruit without any appreciable damage.

Of course there is also waste wherever fruit and vegetables are processed. Thanks to our BTM range pumps, the volume of this waste can be reduced by up to a third. This not only saves waste disposal costs and energy, but also provides you with a clean workplace.



Patented milling equipment  
within the BTM pump range

## Applications (see flow chart on next page)

- 1 BTM range pumps chop and transport whole apples to the buffer tank
- 2 BN or BCSB range pumps transport apple mash from the buffer tank through the tubular heater and finisher to the enzyme tank
- 3 BN or BCSB range pumps transport apple mash from the enzyme tank to the decanter
- 4 BT range pumps transport pomace to the next processing stages

## Features

- Gentle pumping of whole fruit without any appreciable damage (product group N and CS)
- Milling and pumping within a closed system and with minimum O<sub>2</sub> exposure of the pumped medium (BTM range)
- Clean workplace
- Low maintenance requirements/high equipment up time
- Minimal manual transport
- Lower waste disposal volume and costs



### Pump of range BTM 10-12

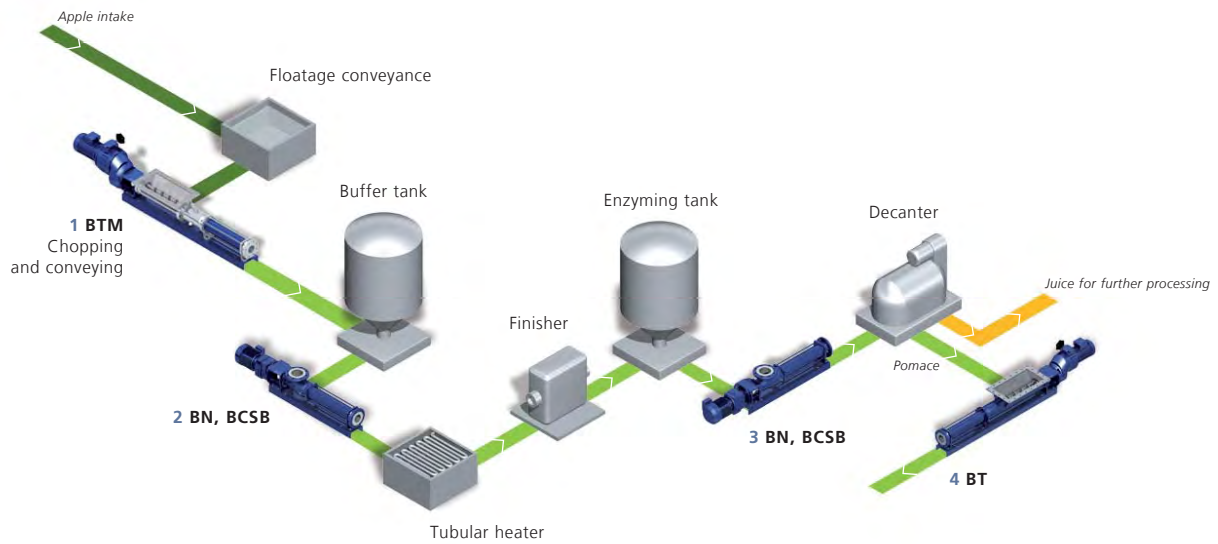
Conveying product: Various fruits  
Conveying capacity: max. 7 m<sup>3</sup>/h (31 GPM) • Pressure: 12 bar (174 PSI)  
Temperature: 10–20 °C (50–68 °F)



### Pump of range BT 35-24

Conveying product: Carrot mash  
Conveying capacity: 5–10 m<sup>3</sup>/h (22–44 GPM) • Pressure: 20 bar (294 PSI)  
Temperature: 70 °C (158 °F)

Flow chart based on fruit juice production



**Pump of range BCSB 10-24**

Conveying product: Fruit puree  
 Conveying capacity: 2–8 m<sup>3</sup>/h (9–35 GPM) • Pressure: 8 bar (116 PSI)  
 Temperature: 7–12 °C (44–53 °F)



**Pump of range BTCS 10-12**

Conveying product: Tomato paste  
 Conveying capacity: 1.3 m<sup>3</sup>/h (6 GPM) • Pressure: 4 bar (58 PSI)  
 Temperature: 10–20 °C (50–68 °F)

# Pumping solutions for breweries and distilleries.



Grain and fruit are the natural and essential basic components of many foods. They are the typical raw ingredients that are fermented or distilled to make alcoholic beverages. The equipment used must not exert extreme shear forces, since this would adversely affect both the physical properties and the chemical structure of the products.

Apart from the sensitive production methods, saving and recycling energy within the other stages of the production process is becoming increasingly important. Unlike conventional methods (compressed air systems or screw conveyors), seepex pumps transport spent grain, for example, using considerably less energy.

A special application is mixing grain with water for subsequent feeding into the mash tun or tub. Mixing is done directly in the hopper of the pump in a closed system – safely, gently and cost-efficiently, without fear of contamination.

Our pumping technologies not only guarantee high quality end products, but also optimize process control, which in turn increases the plants' overall efficiency.

## Applications (see flow chart on next page)

- 1 BT range pumps transport malt from the malt mill and water into the mash tun
- 2 BN range pumps transport mash from the mash tun to the lauter tun
- 3 BN range pumps transport seasoning from the lauter tun to the brew kettle
- 4 BT range pumps transport malt from the lauter tun and yeast from the separator for further processing into fodder
- 5 BCSB range pumps transport hops extract to the brew kettle
- 6 BN range pumps transport yeast-air mixtures to the fermentation tank
- 7 BT range pumps transport yeast from the separator
- 8 BCSB range pumps transport kieselguhr to filtration and to subsequent purification of the bottle washing water

## Features

- Closed system
- Clean workplace
- High product quality
- Improved productivity due to shorter process times
- Energy-savings compared to other systems (compressed air or conveyor systems)
- Low maintenance requirement, high equipment up time



### Pump of range BT 200-6L

Conveying product: Mash  
Conveying capacity: max. 56–150 m<sup>3</sup>/h (246–660 GPM)  
Pressure: 2 bar (29 PSI) • Temperature: 55–62 °C (131–143 °F)

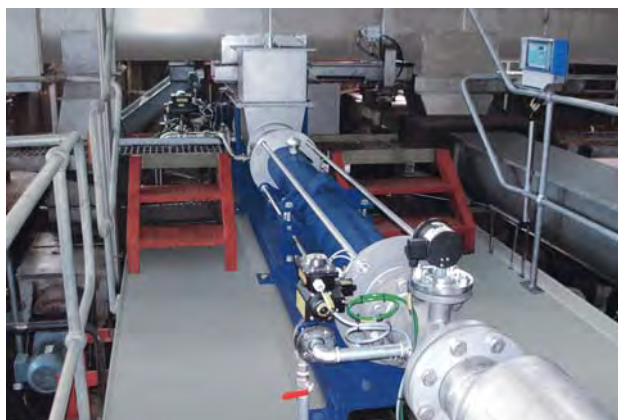
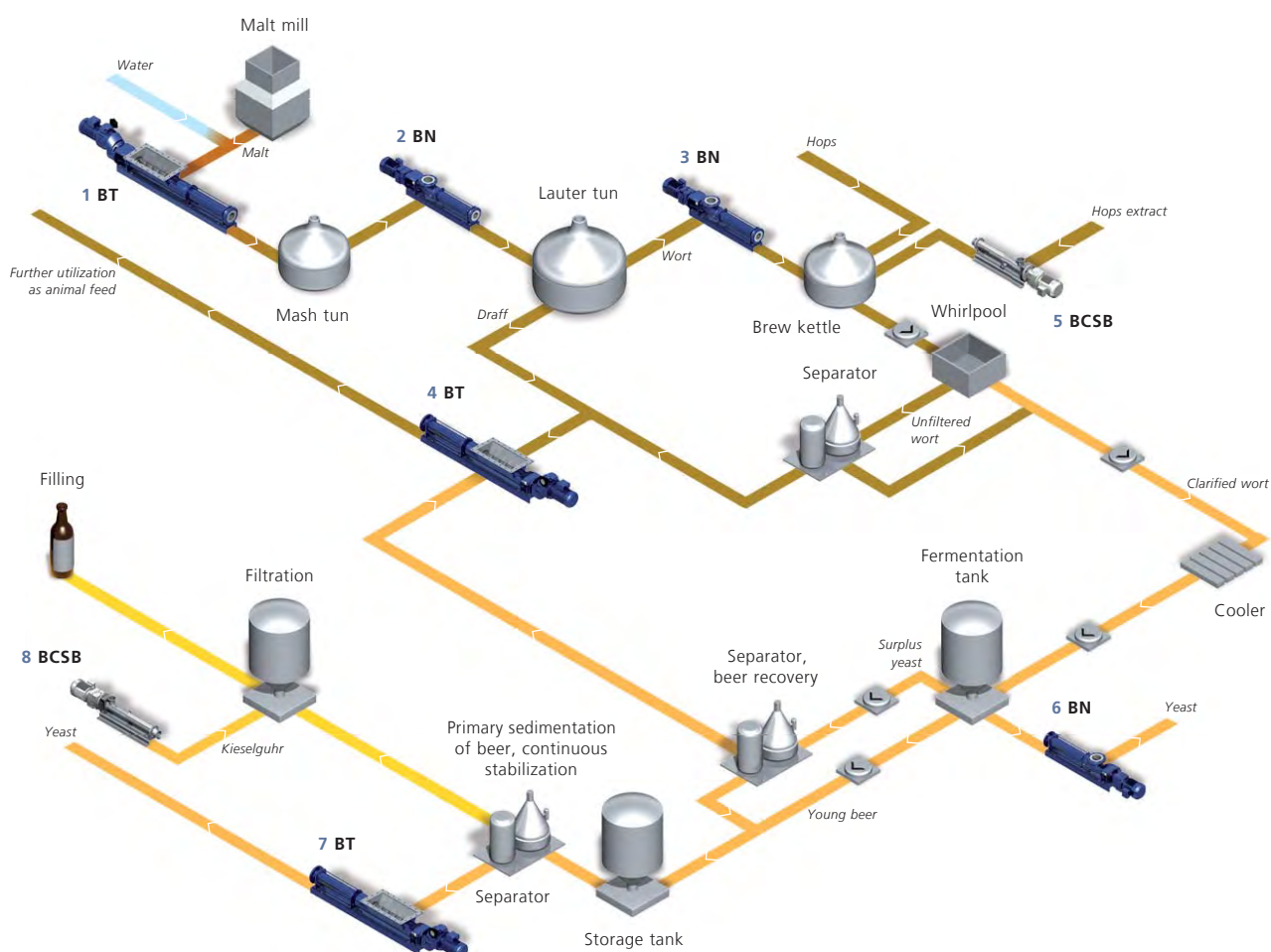


### Pump of range BT 17-12

Conveying product: Draff  
Conveying capacity: 8 m<sup>3</sup>/h (35 GPM)  
Pressure: 4 bar (58 PSI) • Temperature: 80 °C (176 °F)



Flow chart based on beer production



**Pump of range TNS 130-12**

Conveying product: Beer draff  
Conveying capacity: 40–50 m³/h (176–220 GPM)  
Pressure: 6 bar (87 PSI) • Temperature: 60–80 °C (140–176 °F)



**Pump of range BN 52-6L**

Conveying product: Syrup  
Conveying capacity: 10–50 m<sup>3</sup>/h (44–220 GPM)  
Pressure: 2 bar (29 PSI) • Temperature: 60 °C (140 °F)

# Pumping solutions for wine making.



Wine is not only truth but also requires knowledge about the correct method of making it. Vintage wines, spätlese wines, red or white – our progressive cavity pumps for portable and stationary use in the wine industry leave nothing to be desired for wine growers. Gentle, reduced pulsation pumping of grapes is guaranteed by our ranges BCSB, BN and BT.

Gentle means that the fruit is hardly damaged on its way from the destemmer to the fermentation tanks. The quality of the raw berry is maintained to the maximum extent.

The BCSB range pumps stand out due to their compact, easy-to-service close-coupled (block) structure and our tried and true pin joints. The internally streamlined pump housings are easy to clean, leaving virtually no residual matter inside, and therefore comply with the highest hygienic standards. The BT range pumps have a hopper and a feed screw for conveying highly viscous media and those containing solids such as mash or whole grapes must. Since only an individualized pump is a good pump, the length of the hopper opening can be adjusted to the conditions of use.

Last but not least, you might be interested in the fact that all the ranges mentioned are available in elastomers that meet FDA requirements.

## Applications (see flow chart on next page)

- 1 BT or BN range pumps transport mash from the destemmer to the mash container
- 2 BT range pumps transport pomace to the next processing stages
- 3 BN range pumps transport must from the press to the fermentation tank
- 4 BN range pumps transport must from the must tank to purification
- 5 BSCB range pumps transport wine from purification to fining
- 6 BSCB range pumps transport wine from fermentation to storage tanks
- 7 BN range pumps transport sediment and wort to disposal

## Features

- High quality wine thanks to gentle treatment of the raw material
- Portable pumps for flexible use
- Low maintenance requirement, high equipment up time
- Increased efficiency in the manufacturing process



### Pumps of range BCSB 52-6L and BCSB 35-6L

Conveying product: Wine  
Conveying capacity: 44 m<sup>3</sup>/h (194 GPM)  
Pressure: 2–4 bar (29–58 PSI) • Temperature: 5–10 °C (41–50 °F)

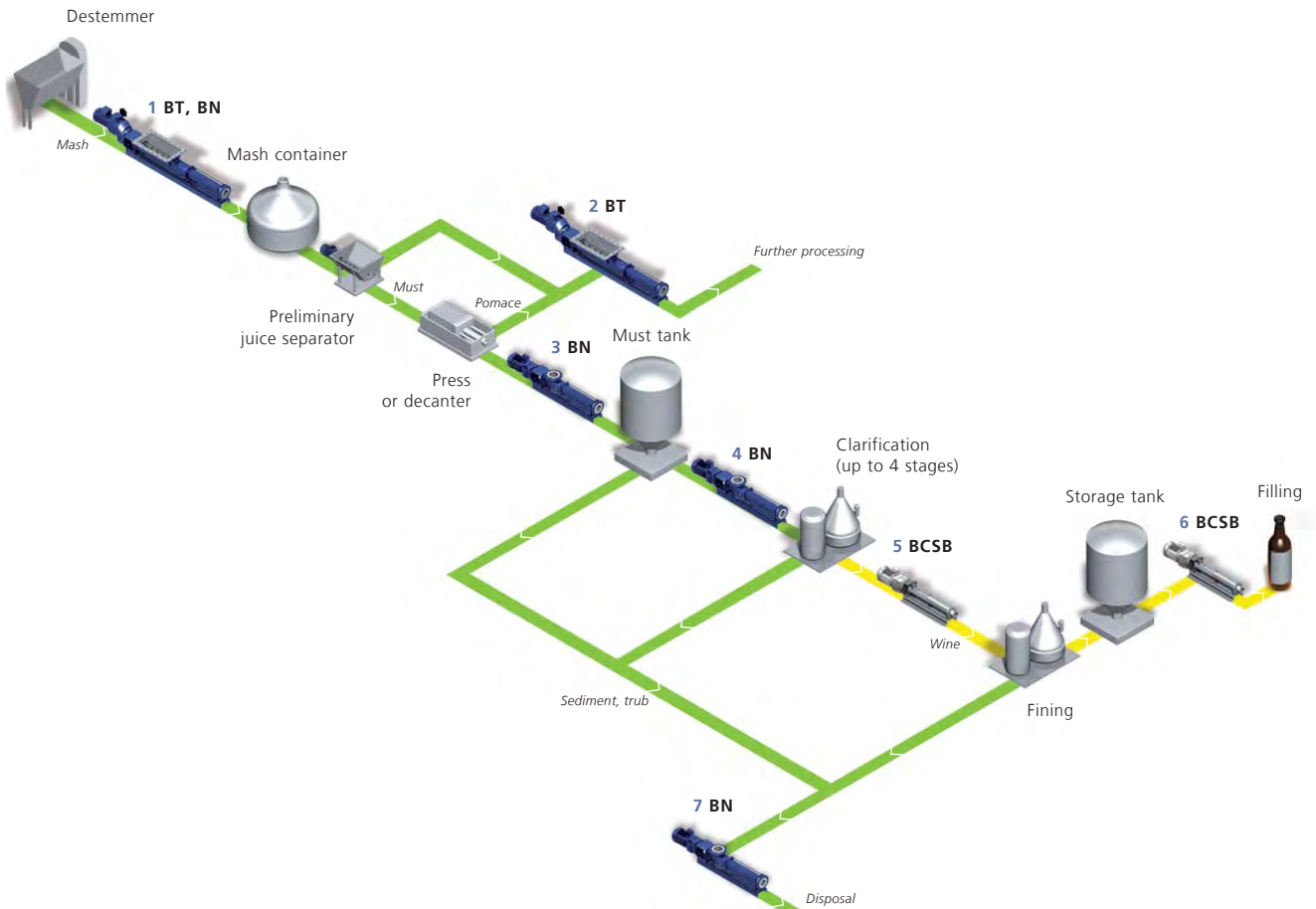


### Pump of range BN 130-6L

Conveying product: Mash  
Conveying capacity: 90 m<sup>3</sup>/h (396 GPM)  
Pressure: 4 bar (58 PSI) • Temperature: 20 °C (68 °F)



# Flow Chart based on wine production



**Pump of range BT 130-6L**  
 Conveying product: Mash  
 Conveying capacity: 68 m<sup>3</sup>/h (300 GPM)  
 Pressure: 4 bar (58 PSI) • Temperature: 20 °C (68 °F)



**Pump of range BCSB 35-6L**  
 Conveying product: Wine  
 Conveying capacity: 32 m<sup>3</sup>/h (140 GPM)  
 Pressure: 2 bar (29 PSI) • Temperature: 20 °C (68 °F)

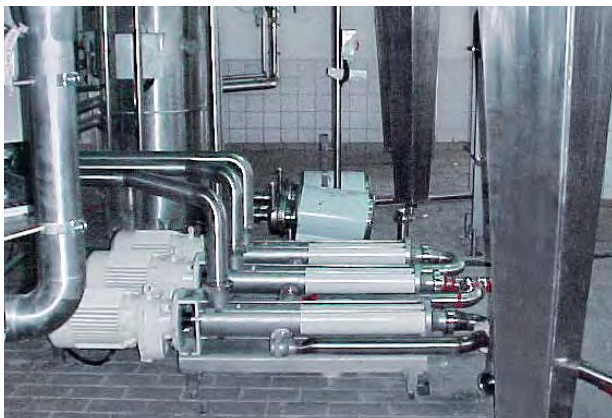
## Further applications.



Due to their specific pump design and function, our progressive cavity pumps are successfully used in other areas of the food industry as well. You will find seepex pumping solutions both in production processes and in the area of waste disposal in the beverage industry.

Thanks to our modular design and numerous material combinations, the technically and economically optimized pump can be made to suit your individual requirements. This guarantees top performance, dependable processing and the lowest life cycle costs.

In addition to this brochure, please also see our other printed material for the dairy industry, the baking and confectionery industry and the disposal of process waste.



**Pump of range BCSO 17-6L**

Conveying product: Yogurt-fruit mixture  
Conveying capacity: 3.5–16 m<sup>3</sup>/h (15–70 GPM)  
Pressure: 4 bar (58 PSI) • Temperature: 5–20 °C (41–68 °F)



**Pump of range BT 35-12 and hopper lifting device**

Conveying product: Gingerbread dough  
Conveying capacity: max. 2 m<sup>3</sup>/h (8.8 GPM) • Pressure: 10 bar (145 PSI)  
Temperature: 20 °C (68 °F)

# Your pump solutions at a glance.



seepex pumps transport thin to high-viscosity products with and without solids at low and high-temperatures, gently, with minimal pulsations and low shear. Other outstanding features include excellent metering accuracy and the ability to easily pump media containing large and soft solids, such as yoghurt with fruit.

Product group T open hopper pumps come in nine different ranges. They are used for high viscosities with only little or no self-flowing characteristics. They are therefore equipped with a feed hopper and a conveyor screw for reliable product feeding. A seepex specialty is the BTM range, which with its built-in cutting device is capable of chopping the material prior to pumping it.

- > Conveying capacity: 50 l/h–500 m<sup>3</sup>/h (0.22–2,200 GPM),  
Pressure: up to 36 bar (540 PSI)

## Range BTM

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Product group N pumps are used in virtually all sectors of the food industry for conveying low-viscosity to high-viscosity materials with or without solids. They are a cost-efficient alternative especially for applications with low hygienic requirements, like candy or dough.

- > Conveying capacity: 30 l/h–500 m<sup>3</sup>/h (0.13–2,200 GPM),  
Pressure: up to 48 bar (720 PSI)

## Range BN

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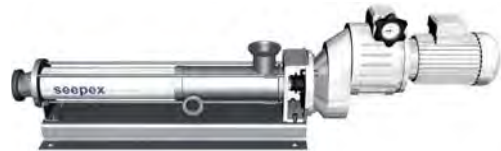


Food pumps of the product group CS meet the highest standards with respect to gentle pumping, sanitation and cleaning. With their open joints and dead-space-free housings, they can be cleaned leaving virtually no residue with CIP cleaning. They are certified according to the high standards of the 3-A Sanitary Standards (USA) and designed based on "EHEDG" guidelines.

- > Conveying capacity: 30 l/h–130 m<sup>3</sup>/h (0.13–572 GPM),  
Pressure: up to 24 bar (360 PSI)

## Range BSCO / BCSB

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Product group D metering pumps are available in six different ranges for pumping and dosing small quantities in virtually all industry sectors. They are especially suited for precise pumping of low to medium-viscosity media, media containing solids, and chemically aggressive media. Precise metering accuracy is guaranteed. The MDC range, which is equipped with open joints and dead-space-free housings, meets 3-A Sanitary Standards.

- > Conveying capacity: 0.2 l/h–1,000 l/h (up to 265 GPH),  
Pressure: up to 24 bar (360 PSI)

## Range MD

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See our "Product groups and ranges" brochure for further solutions for a wide range of applications.



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And what can we get flowing for you? Your nearest contact:



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