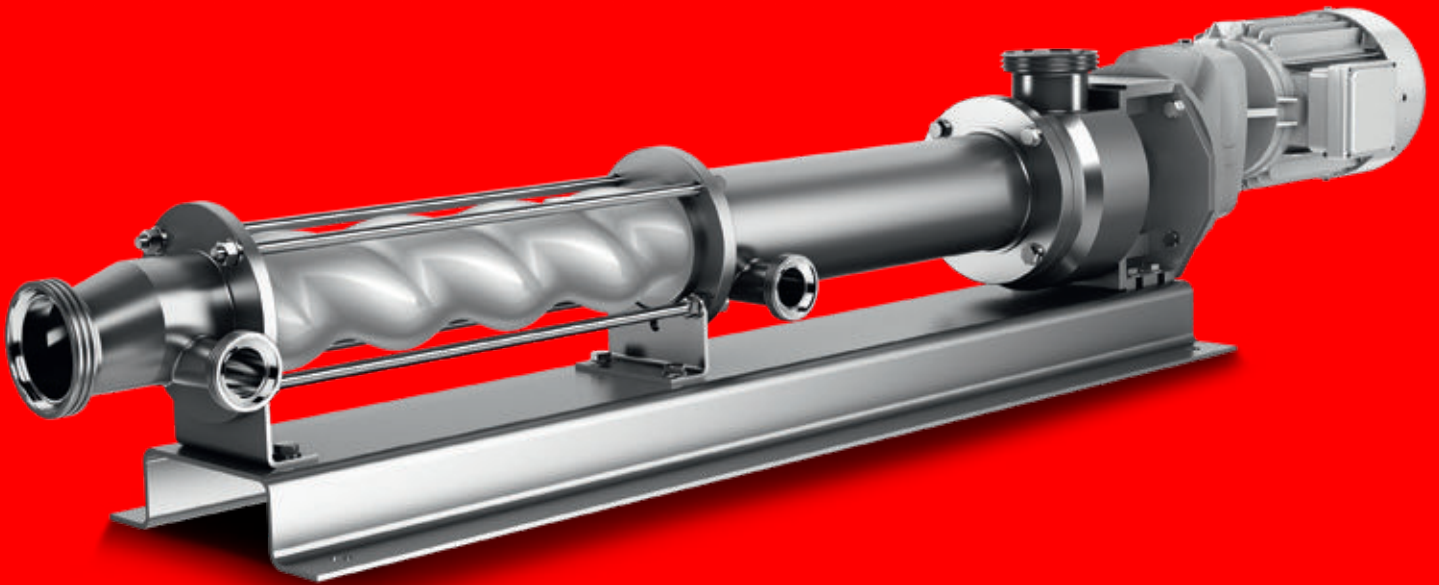


# SEEPEX.

An Ingersoll Rand Business

## A CLEAN SOLUTION PRODUCT GROUP CS



CS

# MORE THAN CLEAN.

**SEEPEX food grade pumps of product group CS:**  
**Used in the food, beverage, pharmaceutical,**  
**cosmetic and personal care industries.**

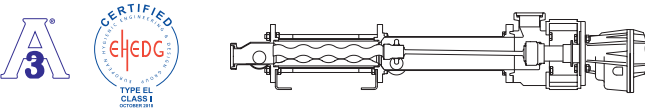
CS progressive cavity pumps are used where cleanliness and hygiene are of the utmost importance. They satisfy the highest requirements with regard to sanitation, gentle conveying, cleaning and sterilization.

Depending on the range, these progressive cavity pumps are built with FDA approved components, are 3-A Sanitary Standards certified and/or are EHEDG certified.

## OVERVIEW OF RANGES

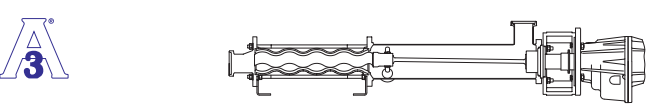
### BCFH RANGE

BCFH range pumps fulfill the highest demands in cleanliness. They are EHEDG certified and ensure residue-free cleaning due to a patent-pending inlet designed using Computational Fluid Dynamics (CFD). They are built with FDA approved components and certified acc. to 3-A Sanitary Standards. The Flexrod – a flexible, removable titanium shaft – and split suction casing simplify service work.



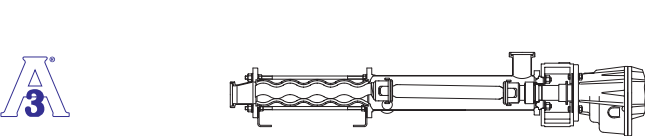
### BCF RANGE

The BCF range is 3-A Sanitary Standards certified. The hygienic design is based on a flexible titanium shaft, the Flexrod, instead of a coupling rod with universal joints. The design ensures residue-free cleaning by CIP and COP and allows for easy replacement of the rotor, Flexrod or drive shaft as individual parts. Additionally, the Flexrod is held in place with food grade fasteners that only require standard hand tools for disassembly.



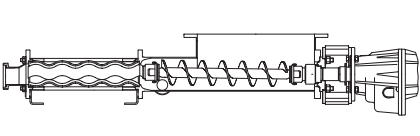
### BCSO RANGE

BCSO range pumps are equipped with open pin joints that can be cleaned without leaving residue through CIP cleaning. Service work can be performed easily and rapidly without the need for special tools. They are built with FDA approved components and are 3-A Sanitary Standards certified.



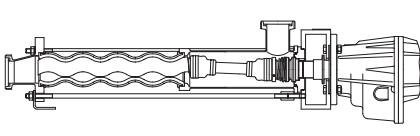
### BTCS RANGE

The BTCS range features a rectangular open hopper with a compression zone and an auger feed screw. The length of the hopper opening is variable to suit the application conditions. They are used for pumping highly viscous products with or without entrained solids. The BTCS range pumps are equipped with either a service friendly open joint or with the proven closed pin joint.



### BCSB RANGE

The BCSB range is equipped with the proven, closed pin joints from the SEEPEX pumps of the BN range. These wear-resistant pin joints are filled with special grease, approved for the food sector and sealed through an elastomeric universal joint sleeve and stainless steel holding bands. They are suitable for use with abrasive media and high operating pressures.



# APPLICATIONS

CONVEYING CAPACITY  
BCSO, BTCS, BCSB  
**30 L/H – 130 M³/H**  
**(0.132 – 572 USGPM)**

CONVEYING CAPACITY  
BCFH, BCF  
**90 L/H – 60 M³/H**  
**(0.4 – 264 USGPM)**

PRESSURE  
**UP TO 24 BAR**  
**(350 PSI)**

The structural advantages of SEEPEX hygienic pumps make them ideal for many applications. They are used in industries such as brewing and distilling, confectionery producers, bakeries, fruit and vegetable processors, dairies, pharmaceutical and cosmetics producers, poultry and meat processing, wineries and soft drink bottling or syrup plants.

They convey foods, drinks, creams and medicines, of both high and low viscosity, using a low shear action. The pumps are also used in the chemical industry as they are easy to rinse with the CIP cleaning process.

**BENEFITS**

- EHEDG certified (BCFH range)
- FDA compliant and 3-A approved components
- CIP / SIP / COP and residue-free cleaning
- Proven hygienic mechanical seals
- Easy to service, no special tools required
- Particularly gentle pumping, low product shear
- Easily pumps thin to highly viscous materials
- Stable conveying capacity and pressure
- Flexible installation, small footprint
- Easy maintenance due to simple separation of Flexrod from rotor and drive shaft (BCFH and BCF ranges)

# FLEXROD

BENEFITS  
**HYGIENIC DESIGN**

**SIMPLIFIED  
MAINTENANCE**

Flexrod – a flexible titanium coupling rod – is the result of consistent refinement to both the BCF and BCFH ranges.

Stainless steel or even mild steel rods with corrosion resistant coatings are not nearly as flexible as titanium. SEEPEX has expertise in titanium component design and fabrication from solutions developed for water disinfection and ingredient dosing.

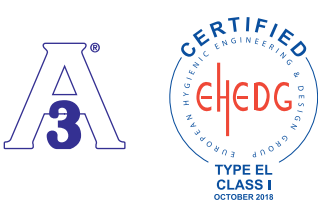
The Flexrod is connected to the rotor and drive shaft but is also separate, allowing for easy replacement of the rotor, Flexrod or drive shaft as individual parts. Additionally, the Flexrod is held in place with food grade fasteners that only require standard hand tools for disassembly. All connections are designed to meet EHEDG and 3-A requirements.

The internal design allows complete flushing of all areas, enabling efficient cleaning by CIP (Clean in Place) or COP (Clean out of Place). CIP cycles are shorter, and COP is simplified by easier disassembly of the rotating parts without needing to disassemble the Flexrod.

Existing CS pumps can be upgraded just by changing the wetted rotating parts. Our SEEPEX experts will gladly advise you in this simple update.



# SETTING STANDARDS: BCFH.



BCFH range pumps are EHEDG (European Hygienic Engineering & Design Group) Type EL Class I certified. This certification means that the pump design has passed stringent practical testing and gives the best hygienic results after cleaning. Due to the EHEDG-certified design the BCFH range fulfills the highest demands of cleanliness in the food and beverage and pharmaceutical industries.

In hygienic applications thorough cleaning of pumps is critical as food residue could contaminate subsequent production and make it unfit for consumption. Our BCFH range is equipped with a patent pending inlet with CFD-optimized geometry that induces an effective swirling flow in the suction casing during CIP and SIP and allows residue-free cleaning.

The BCFH range features a flexible titanium coupling rod – the Flexrod. It is detachable for simple and fast maintenance and only requires standard hand tools for disassembly. Another significant feature of BCFH is the split suction casing that greatly simplifies maintenance of the rotating unit and mechanical seal without removing the suction pipework.

**STATOR**

In food-grade materials acc. to FDA, BfR and EU 1935-2004 and follows pharma regulations acc. to several USP classes. Light and black materials in equal wall or standard design available. Optimal, hygienic sealing of the stator through integrally molded sealing surface.

**ROTOR**

Wear resistant and corrosion-resistant materials. Optionally with hard surface treatment.

**SUCTION PIPE**

Patent pending inlet with CFD-optimized geometry for residue-free cleaning.

**PRESSURE BRANCH**

Made of stainless steel, with internally polished finish and externally satin finish. Allows effective draining. Connection: pipe coupling to DIN, Tri Clamp® or any other known sanitary fitting.

**BASE PLATE**

Tailor-made selection of base plates. The base plates can be easily combined with different drives from all major manufacturers.

**FLEXROD**

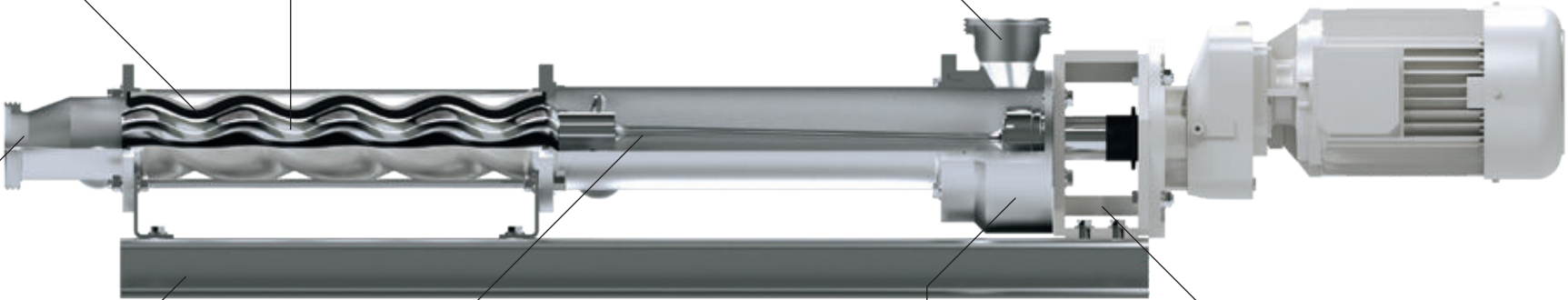
Flexible titanium shaft without joints. Hygienic cleaning through CIP and SIP possible. Simple disassembly of rotor and drive shaft.

**SPLIT SUCTION CASING**

For easy maintenance of the rotating unit and mechanical seal without dismantling the suction pipe.

**LANTERN**

A corrosion resistant design, optionally made of stainless steel, connects the pump and drive and secures the assembly to the base plate or skid.



# 3-A CERTIFIED: BCF.



Product group CS has been extended with the BCF range. The pump is equipped with the flexible, hygienic Flexrod and a rotor and drive shaft made of food grade stainless steel (AISI 316). The Flexrod assembly and all connections are designed to meet EHEDG and 3-A requirements.

BCF is an alternative or retrofit to the BCSO range. Exchanging BCSO with BCF is easy, since the external dimensions and pump casing are identical. Additionally, no further adaptation of the suction/discharge pipe is required.

**STATOR**

In food-grade materials acc. to FDA, BfR and EU 1935-2004 and follows pharma regulations acc. to several USP classes. Light and black materials in equal wall or standard design available. Optimal, hygienic sealing of the stator through integrally molded sealing surface.

**PRESSURE BRANCH**

Made of stainless steel, with internally polished finish and externally satin finish. Allows effective draining. Connection: pipe coupling to DIN, Tri Clamp® or any other known sanitary fitting.

**BASE PLATE**

Tailor-made selection of base plates. The base plates can be easily combined with different drives from all major manufacturers.

**FLEXROD**

Flexible titanium shaft without joints. Hygienic cleaning through CIP and SIP possible. Simple disassembly of rotor and drive shaft.

**SUCTION PIPE**

Available in DIN, Tri Clamp® or any other known sanitary fitting.

**PLUG-IN SHAFT**

Designed for easy CIP, made of stainless steel and designed to mount the mechanical seal. The connection is designed for easy dismantling of the pump and drive enabling quick replacement of the rotating parts and shaft seals.

**DRIVE**

Geared motors, variable speed drives or frequency controlled drives, are directly flanged to the pump without additional coupling. Covers made of stainless steel are available.

**LANTERN**

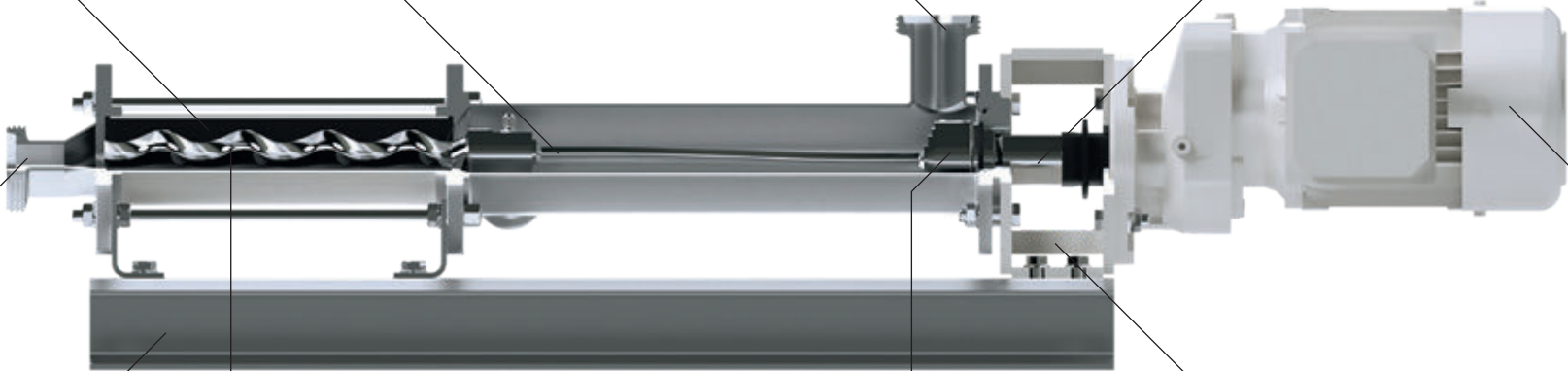
A corrosion resistant design, optionally made of stainless steel, connects the pump and drive and secures the assembly to the base plate or skid.

**ROTOR**

Wear resistant and corrosion-resistant materials. Optionally with hard surface treatment.

**MECHANICAL SEAL**

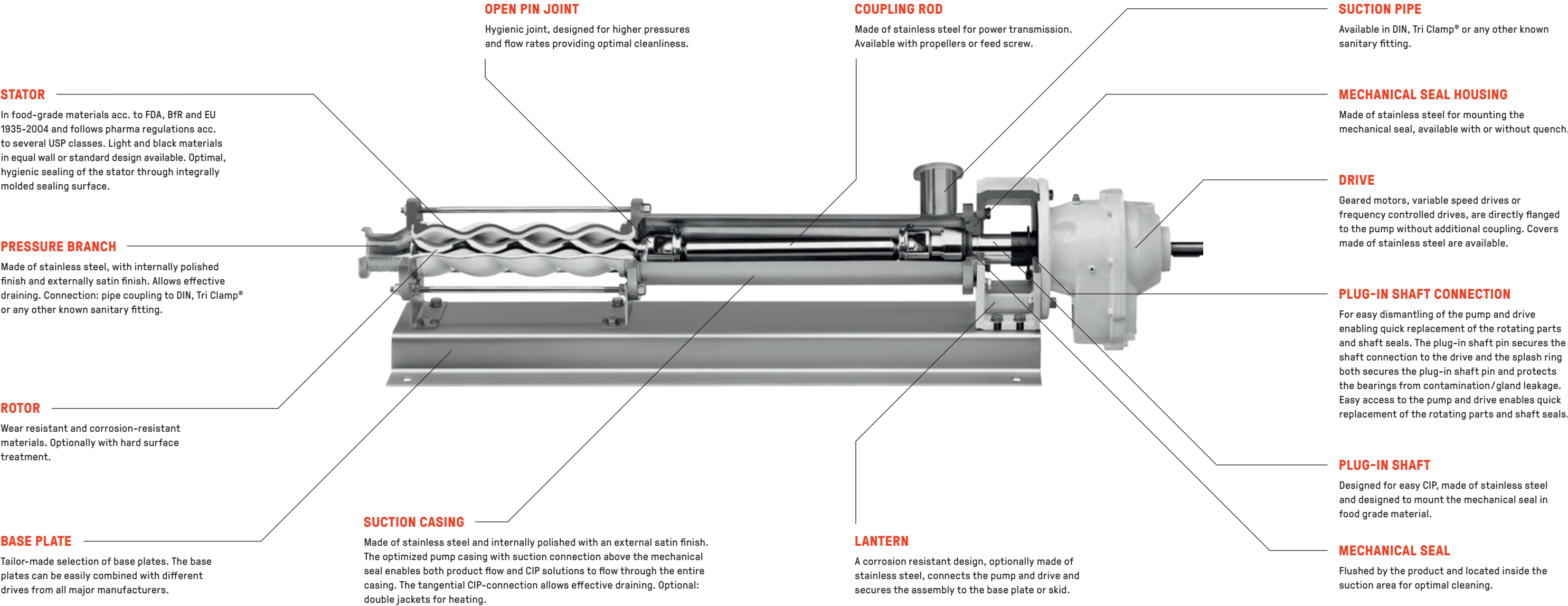
Flushed by the product and located inside the suction area for optimal cleaning.





# CLEAN AND SAFE.

The BCSO / BCSB / BTCS range pumps are proven, hygienic solutions for numerous media in the food to pharmaceutical industries. They share the same hygienic design and differ with regard to their joints: BCSB with an enclosed universal joint and BCSO with an open pin joint. BTCS can be equipped with either of the joints and additionally features an open hopper. This assortment ensures that our customers receive the best solution for their application.





**SEEPEX GmbH**  
[www.seepex.com](http://www.seepex.com)