AMCAL
INDUSTRIAL PUMP SOLUTIONS

Bornemann Pumps
DATA BOOKLET

Bornemann

SLH-4-Series

The standard for hygienic twin screw pumps for food, beverage and more



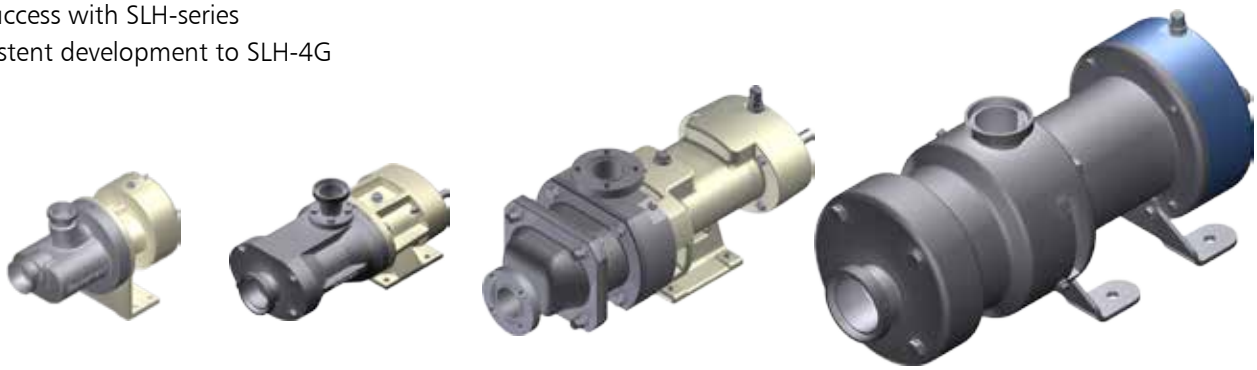
History & Portfolio

Hygienic Twin-Screw Pumps – consistent development at ITT Bornemann

- Experience in twin-screw for more than 75 years
- Using twin-screw in food applications beginning of 1990's
- Pioneer of using twin-screw in food application
- Big success with SLH-series
- Consistent development to SLH-4G

SLH-Series – the solution for all applications

Whether universal or aseptic processes or applications with high viscosities, high pressures or sensitive media, the SLH series is the best solution!

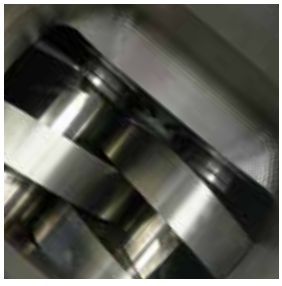


SLH-4G

SLH-4G	SLH-4S	SLH-4P	SLH-4U	SLH-4D	SLH-4V
Engineered Pump Customized Solutions Aseptic	Smooth Handling Extreme Viscosity	High Pressure	Uniform Standardized	Dosing	Vertical Solution Best Particle Handling

ITT Bornemann – the supplier for customized engineering

The portfolio of SLH series offers a solution for almost any application.
But also for special customers request we supply optimal solutions.



Customized Features



Customized Pump

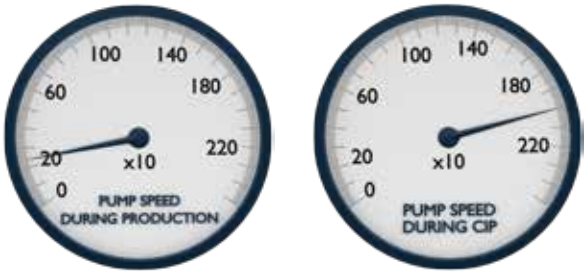


Customized System

The Benefits of the SLH-4 Series

2 in 1 Principle

Due to the wide range conveying product and cleaning (CIP) is possible with one pump!
(rpm: 100-3000 min^{-1})



Improve your hygienic level

SLH pumps are available with EHEDG and 3-A label as far as these design rules are applied. The SLH construction is ideal for aseptic applications.

CERTIFIED EHEDG TYPE EL CLASS I JULY 2014

CERTIFIED EHEDG TYPE EL ASEPTIC CLASS I JULY 2014

3-A

High quality products need to be handled by high quality equipment

Due to the pumps working principle, the product is conveyed very gently. Furthermore, the pump operates with very low pulsation.



Longest Lifetime – Best Operational Excellence

There is no metallic contact between the conveyor screw and pump housing. Thus, abrasive and non-lubricating media are easily conveyed without causing wear.



Flexibility – the best solution for all operating points

The SLH operates at a wide range of speeds, providing flexibility for many different operating conditions. Therefore, different operating pressures, viscosities and temperatures are handled at the best operating point.



Suction Capability – Only the physical limitations can stop us

The pump is self-priming and can produce negative pressures of up to 0.1 bar | 1.45 psi abs.

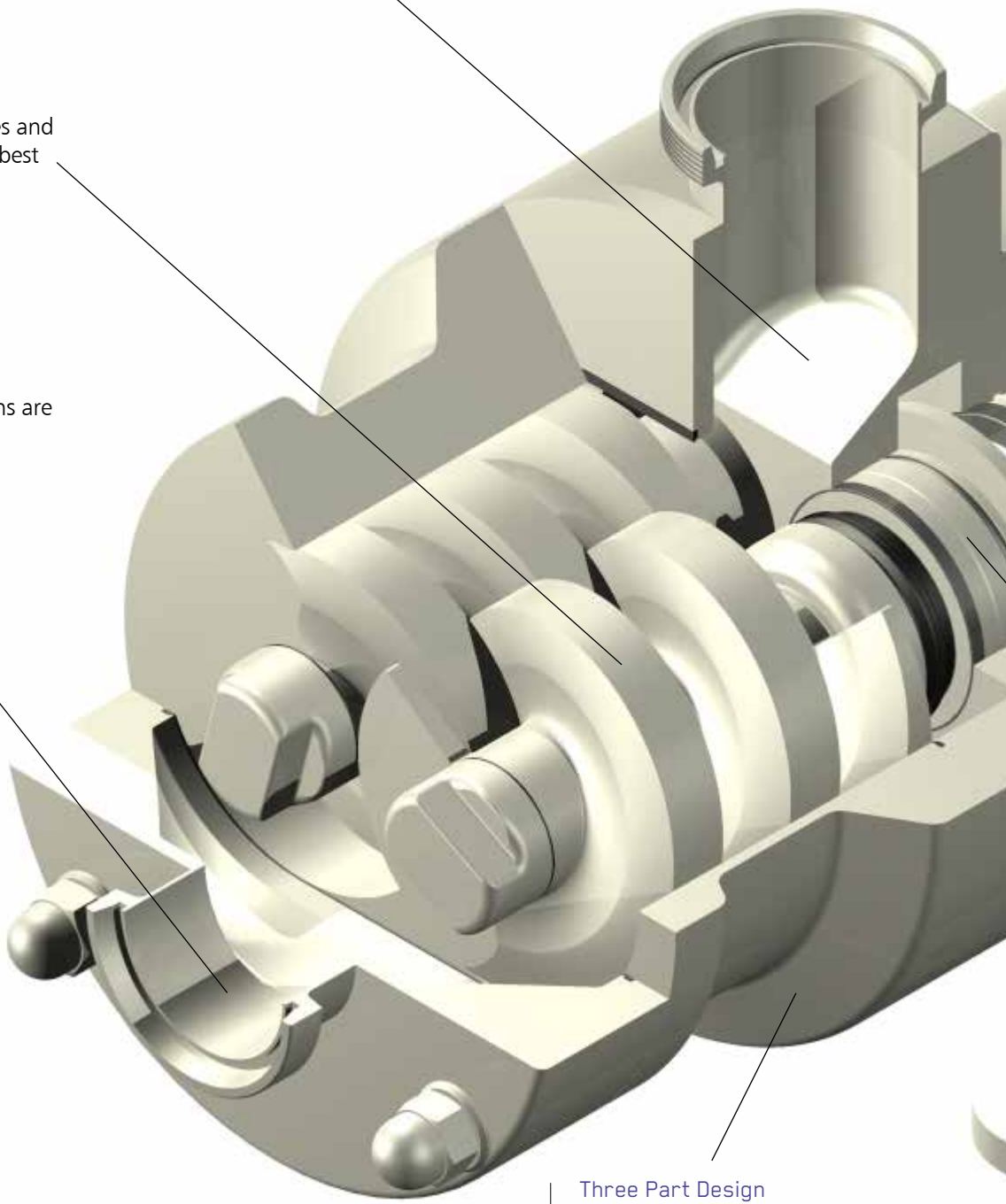


Technical Features

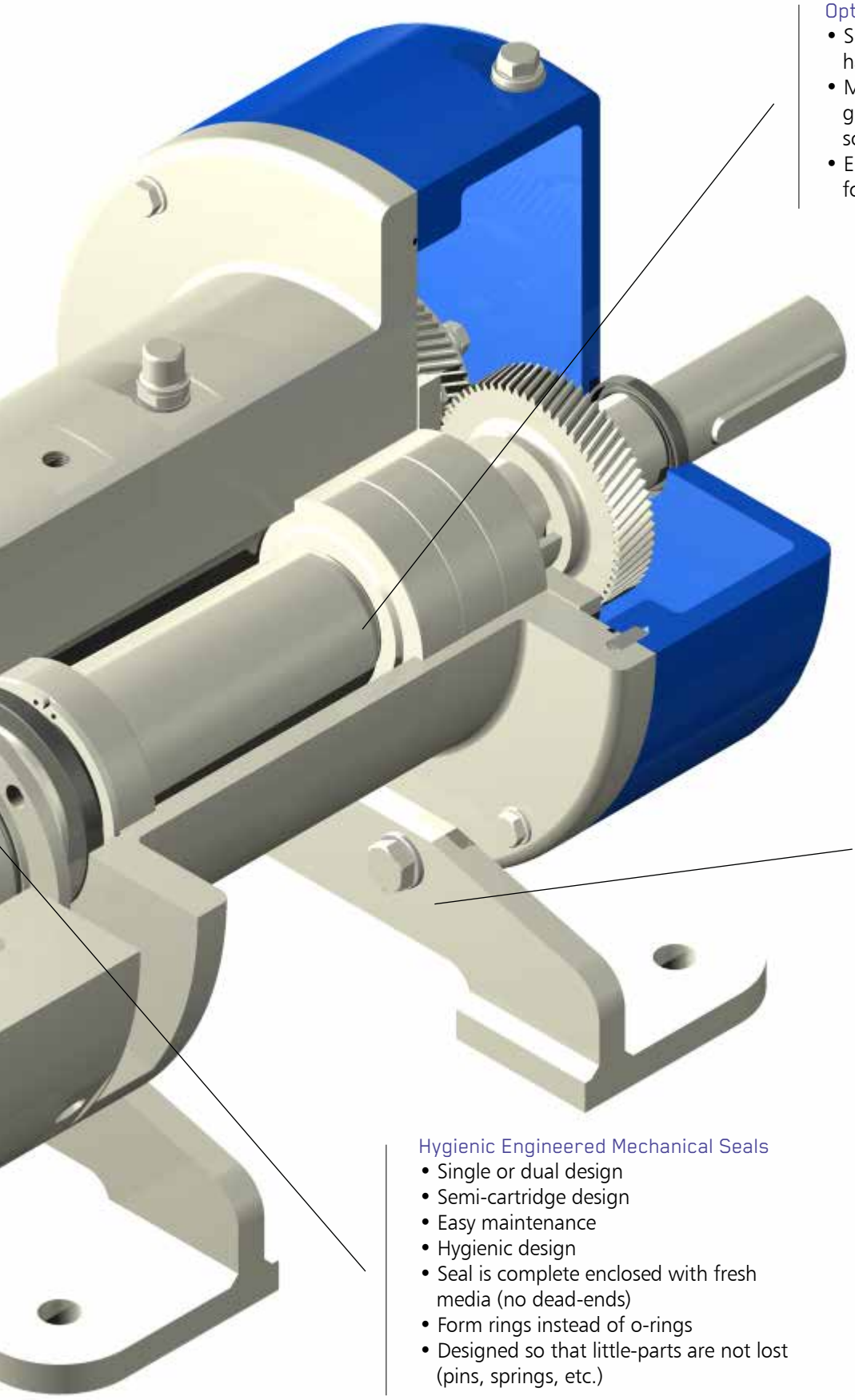
Material & Surface
- Product wetted parts are designed for food contact
- Steel parts are in 316 L
- Surface roughness Ra $< 0.8\ \mu$m as standard
- Elastomers are FDA-registered

Engineered Screws
- Many pitches, different profiles and forms are available to get the best solution for each customers requirement

Customized Connection
- The most common connections are available as standard
- Other connections on request



Three Part Design
- Easy maintenance (manual cleaning)
- Spare part optimized



Optimized Bearing Unit

- Special bearing arrangement to handle high pressure
- Machined timing gears to guarantee no contact between screws and housing
- Engineered internal oil circulation for optimized heat exchange

Customized Feet Arrangement

- Fits in standard for typical motor size
- Can easily be changed for customer requirement

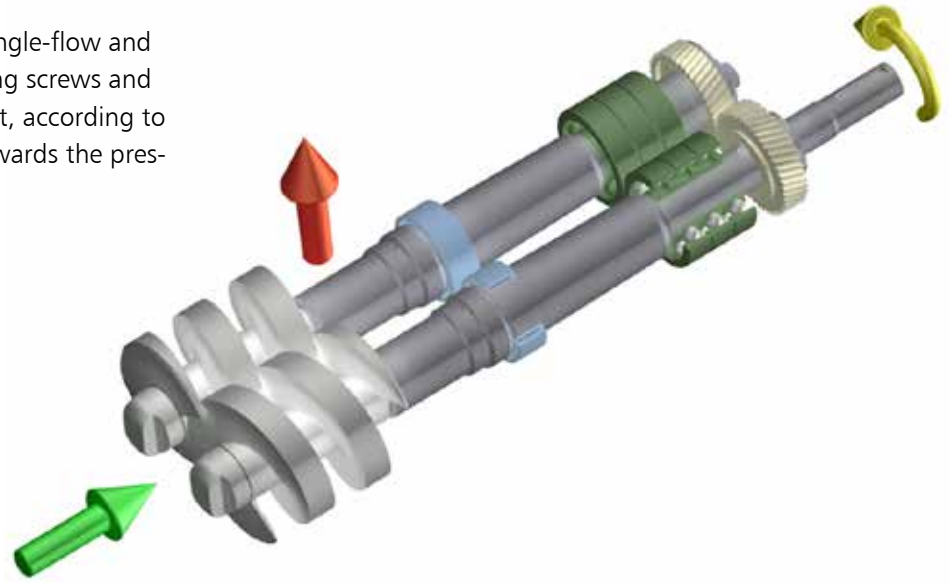
Hygienic Engineered Mechanical Seals

- Single or dual design
- Semi-cartridge design
- Easy maintenance
- Hygienic design
- Seal is complete enclosed with fresh media (no dead-ends)
- Form rings instead of o-rings
- Designed so that little-parts are not lost (pins, springs, etc.)

Working Principle & Performance

Mode of operation

ITT Bornemann SLH twin-screw-pumps are single-flow and self-priming. Two non-contacting intermeshing screws and the pump housing form closed chambers that, according to the direction of rotation, constantly move towards the pressure discharge end of the pump.



Performance Data

	SLH-4G	SLH-4P	SLH-4S	SLH-4U	SLH-4D
 Capacity	Up to 300 m³/h| 1320 gpm	Up to 150 m³/h| 660 gpm	Up to 300 m³/h| 1320 gpm	Up to 150 m³/h| 660 gpm	Up to 5 l/h| 0.25 gpm/h
 Differential Pressure	Up to 16 bar| 232 psi	Up to 25 bar| 363 psi	Up to 6 bar| 87 psi	Up to 16 bar| 232 psi	Up to 16 bar| 232 psi
 Rotation Speed	Up to 3000 rpm	Up to 1500 rpm	Up to 1500 rpm	Up to 2500 rpm	Up to 1000 rpm
 Medium Temperature	Up to 230°C| 446°F	Up to 150°C| 302°F	Up to 150°C| 302°F	Up to 150°C| 302°F	Up to 180°C| 356°F
 Viscosity	Up to 1.000.000 cst	Up to 1.000.000 cst	Up to 1.000.000 cst	Up to 1.000.000 cst	Up to 1.000.000 cst

Applications

Bornemann pumps for food

A gentle hygienic production and even more operating efficiency








Beverage industry

- Juices
- Concentrates
- Wines
- Sparkling wine

Sweets

- Chocolate
- Liquid sugar
- Fudge
- Cream
- Raw mixtures
- Fillings

Meat products

- Sausage meat
- Sausage prep

Pharmaceutical industry

- Raw materials
- Cosmetics
- Personal care
- Bio-Pharma

Convenience

- Oils & greases
- Soups
- Sauces
- Dressings
- Ketchup
- Mustard
- Mayonnaise
- Mousse
- Honey
- Spreads
- Salads
- Meats
- Fish
- Delicacies

Dairy products

- Yogurt
- Quark
- Single cream
- Butter
- Pudding
- Desserts
- Concentrates
- Melted cheese

Unique solutions made by the specialist



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