

Hygienic twin screw pumps for
food, pharmaceuticals and more

SLH-4G - the next generation



ITT

ENGINEERED FOR LIFE

B Bornemann

Consistent development

Our decades of experience lead to innovative new products

The first twin screw pumps of this type were installed 20 years ago, with several units still in service today.

many years of experience working with our customers, general market requirements and the demands of relevant directives and certifications.

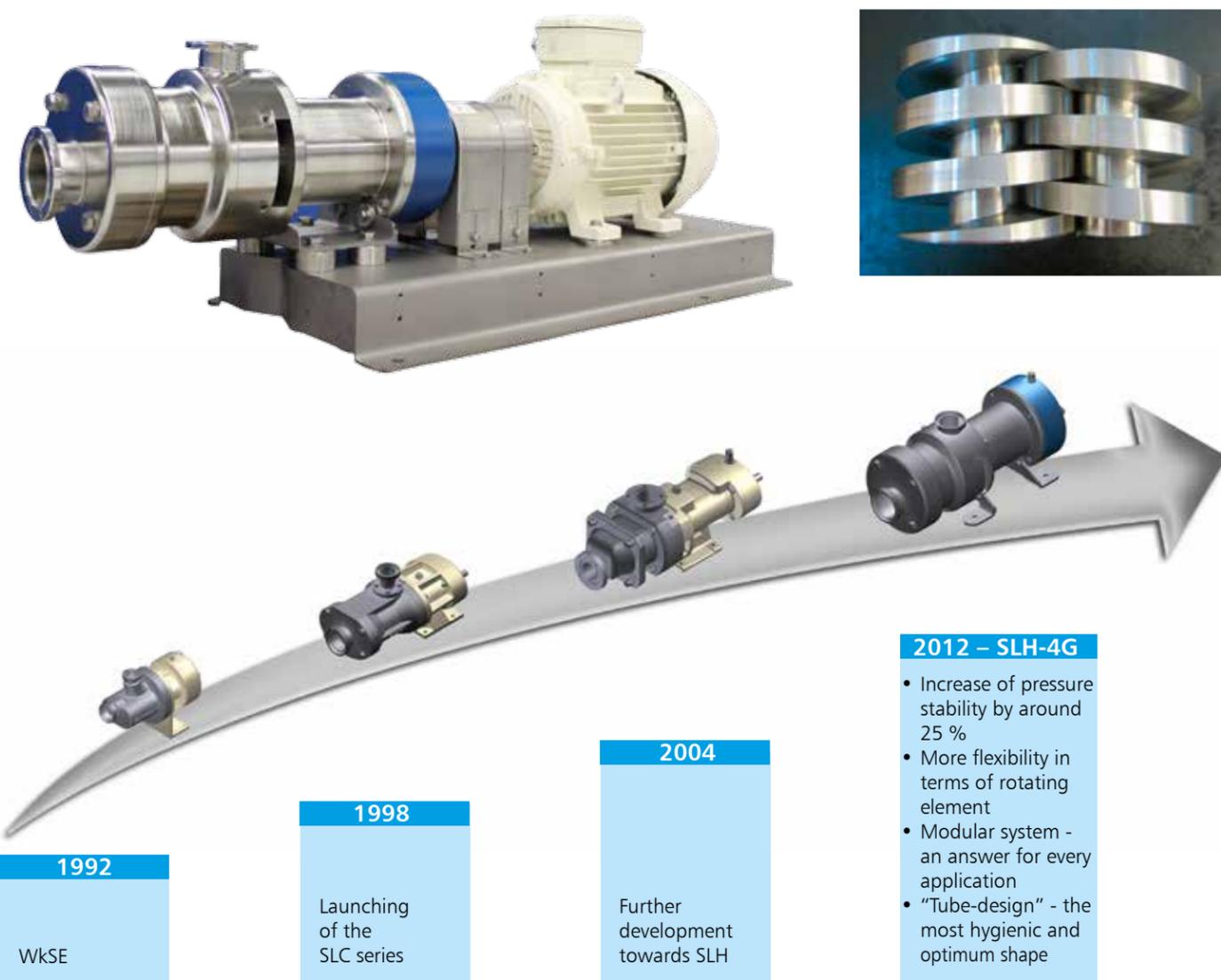
and the pump housing form closed chambers that, according to the direction of rotation, constantly move towards the pressure discharge end of the pump.

Developed for maximum performance

The consistent ongoing development of the SLH has been based on our

Mode of operation

Bornemann SLH twin screw pumps are single-flow and self-priming. Two non-contacting intermeshing screws



2012 – SLH-4G

- Increase of pressure stability by around 25 %
- More flexibility in terms of rotating element
- Modular system - an answer for every application
- "Tube-design" - the most hygienic and optimum shape

SLH-4G, developed for maximum performance

With the new frame construction, Bornemann has created an ultra-hygienic solution that ensures the pump assembly is stable while providing all the benefits of a conventional block design.



SLH-4G

Optimizations provide even greater efficiency

- Pressure stability increased by around 25%
- Even more flexibility in terms of the rotating elements - a solution for every application with just 4 different sizes
- Optimized sealing technology
- "Tube-design" - the most hygienic and optimum shape - perfectly rounded
- Hygienic frame construction

For a hygienic production

The decisive advantages of the modular system

6 reasons to believe

1 CIP and SIP – easy cleaning and sterilization

The 2-in-1 principle conveys and cleans with one pump

Due to the wide range of pump speeds – up to a maximum of 3,600 rpm, process cycles as well as CIP and SIP procedures are possible with just one pump. The advantages are obvious: no need for a CIP pump or the associated piping, valve and MSR technology. It saves valuable space and reduces your investment costs.

2 Hygienic Design

“Tube-design” - optimal hygiene inside and outside

The new construction meets the growing hygiene demands of the Food and Pharmaceutical Industry (EHEDG and 3A). The round shape as well as the frame construction leave nothing to be desired with regard to the cleaning.

3 Smooth and pulsation-free conveyance

Smooth and pulsation-free handling for sensitive products

The axial conveyance system enables cautious, low-pulsation handling of sensitive products. It protects the media and maintains size, surface and visual integrity of the products.

4 Top resistance to wear leads

For safe production and extended lifetime

SLH pumps feature no metal-to-metal contact between the pump screws and the housing. This enables the trouble-free conveyance of non-lubricating and abrasive media.

5 Widest range of viscosities

High flexibility

The high speed range increases flexibility of use with varying viscosities, temperatures, operating pressures or other important criteria. The conveyance of low viscous to extremely high viscous media is possible (more than 1.000.000 cSt).

6 High suction performance for more production efficiency

Economic efficiency in the production

The SLH 4-G is self-priming down to a vacuum of less than -0.8 bar when the pump is filled. Products can be conveyed easily out of the vacuum and tank lorries.

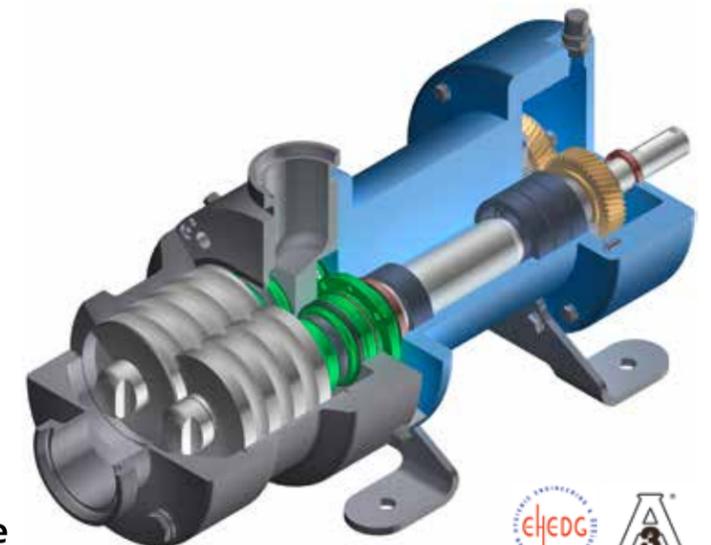
2-in-1 convey and clean with one pump

SLH-4G, the most recent pump-development for the food- and pharmaceutical industry

		SLH-4G 1000	SLH-4G 2000	SLH-4G 3000	SLH-4G 4000
Output capacities	Medium	up to 5 m³/h (22 gpm)	up to 35 m³/h (154 gpm)	up to 80 m³/h (252 gpm)	up to 150 m³/h (660 gpm)
	CIP	max. 20 m³/h (88 gpm)	max. 50 m³/h (220 gpm)	max. 120 m³/h (528 gpm)	max. 200 m³/h (880 gpm)
The output capacities vary depending on differential pressure and viscosity					
Flange sizes		DN 25 - DN 65 1 1/2" Tri-clamp	DN 40 - DN 80 2" Tri-clamp	DN 50 - DN 125 3" and 4" Tri-clamp	DN 65 - DN 200 4" and 6" Tri-clamp
		more flange connections upon request			
Differential pressure		up to max. 25 bar (363 psi)			
Speed		up to 3.600 rpm			
Viscosity		more than 1.000.000 cSt			
Temperatures	Medium	up to 180°C (356°F)			
	CIP	up to 95°C (203°F)			
	SIP	up to 150°C (302°F)			

Modular System

Using a modular system, Bornemann offers four pump sizes and different screw sets that cover a conveyance range up to 200 m³/h, (880 gpm) with a unit size up to 55 mm diameter. The different screw sizes make it possible to handle a wide range of flow capacities with the same viscosities, operating pressures and rotation speeds.



2-in-1 principle, an application example

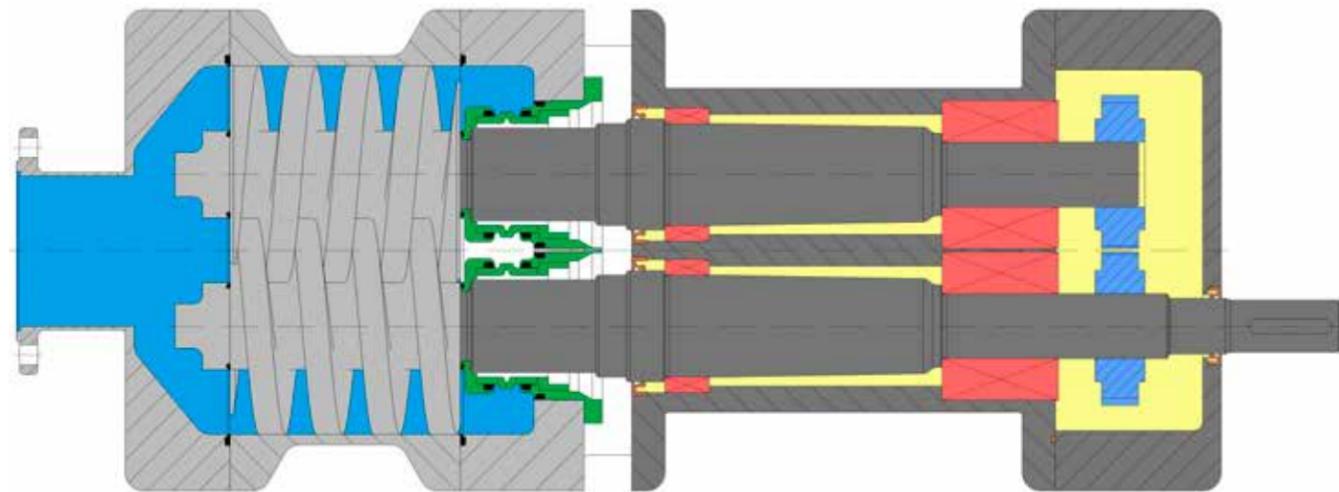
Fruit concentrate 1 and 2. Pump type SLH-4G 3031, motor 11 kW, 6 pole standard motor (VFD-driven)

	Product Conveyance		Cleaning
	Concentrate 1	Concentrate 2	CIP
Speed	850 rpm	660 rpm	2045 rpm
Differential pressure	8 bar (116 psi)	10 bar (145 psi)	2 bar (29 psi)
Viscosity	500 cSt	6000 cSt	1 cSt
Temperature	70°C (158°F)	20°C (68°F)	95°C (203°F)
Output capacities	10 m³/h (44 gpm)	8 m³/h (35 gpm)	25 m³/h (110 gpm)
Power	5 kW	6 kW	4,5 kW

The model for smooth conveyance of products

The consistent development of power

Schematic diagram of SLH-4G



Twin screw pumps are predestinated by their operation mode and the construction for low shearing and smooth handling of sensitive products. The axial transport, without changing direction, as well as the non-contacting intermeshing screws, provide optimum results.

- product
- parts with product-contact
- rubbers with product-contact
- mechanical seal
- lubricant
- parts with non product-contact
- rubbers with non product-contact
- bearings
- timing gears

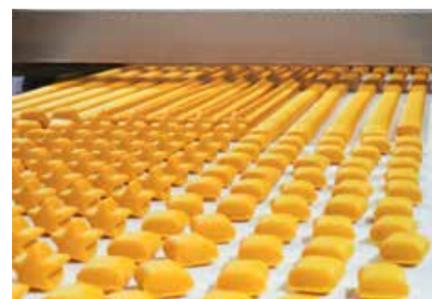


Double acting mechanical seal

Each pump can be optionally equipped with a single acting or double acting mechanical seal.



Single acting mechanical seal



Bornemann pumps for food, pharmaceuticals and more

A gentle and hygienic production and even more operating efficiency



Beverage industry

- Juices
- Concentrates
- Syrups
- Wines
- Sparkling wine
- Malt extract

Sweets

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

Meat products

- Sausage meat
- Sausage prep
- Pet food

Pharmaceutical industry

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

Convenience

- Oils & greases
- Soups
- Sauces
- Dressings
- Ketchup
- Mustard
- Mayonnaise
- Cream of wheat
- Dough
- Marmalade
- Mousse
- Honey
- Spreads
- Salads
- Meats
- Fish
- Delicacies
- Baby food
- Products in chunky form

Dairy products

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

Unique solutions made by the specialist



ITT Bornemann GmbH

Industriestraße 2
31683 Obernkirchen
Germany
Fon: +49 5724 390-0
Fax: +49 5724 390-290
info@bornemann.com
www.bornemann.com



Germany – Headquarter

Canada

Bornemann Inc.

320 441, 5th Avenue S.W.
Calgary, Alberta
Canada T2P 2V1
CANADA
Fon: +1 403 294 0777
Fax: +1 403 262 4073
info.ca@bornemann.com
www.bornemann-ca.com

USA

ITT Bornemann USA, Inc.

10375 Richmond Avenue,
Suite 1575
TX 77042 Houston
UNITED STATES OF AMERICA
Fon: +1 832 320 2500
info.usa@bornemann.com
www.bornemann-usa.com

Argentina

Bombas Bornemann S.R.L.

Mariano Moreno 4380
B1605BOD Munro
Prov. Buenos Aires
ARGENTINA
Fon: +54 11 475 680 08
Fax: +54 11 475 655 41
info.ar@bornemann.com
www.bornemann-ar.com

Mexico

Bornemann S.A. de C.V.

Mariano Escobedo 510 piso 12 y PH 33
11590 Col. Anzures, Distrito Federal
MEXICO
Fon: +52 55 2000 0589
info.mx@bornemann.com
www.bornemann-mx.com

Singapore

Bornemann Pumps Asia Pte. Ltd.

10 Jalan Kilang #06-01 Sime Darby
Enterprise Centre
159410 Singapore
SINGAPORE
Fon: +65 6561 4882
Fax: +65 6561 6784
info.sg@bornemann.com
www.bornemann-sg.com

China

Bornemann Pumps & Systems (Tianjin) Co., Ltd.

Jinbin General Building No. 6,
No. 45 Muning Road
TEDA, Tianjin
P. R. China 300457
CHINA
Fon: +86 22 662 978 00
Fax: +86 22 253 267 99
info.service@bornemann-cn.com
www.bornemann-cn.com

Bornemann Pumps International Tianjin

Room 1101
Tianjin Binjiang International Hotel
No. 105 Jianshe Road
Heping District, Tianjin
CHINA
Fon: +86 22 5881 2997
Fax: +86 22 5881 2996
info.sales@bornemann-cn.com
www.bornemann-cn.com

UAE

Bornemann Middle East FZE

Dubai Airport Freezone
Office 530 / 6WA West Wing
PO Box 293 582
Dubai
UNITED ARAB EMIRATES
Fon: +971 4 214 6511
Fax: +971 4 214 6512
info.ae@bornemann.com
www.bornemann-ae.com