

Bornemann pumps and more

Introducing a global system partner



From pump pioneer to partner for system-solutions



Gero von der Wense, CEO
ITT Bornemann GmbH

If you still value the label "Made in Germany", you will be pleased to know that Bornemann is one of the companies that contributed to its success. Since its founding in 1853, we have stood for relentless innovation, reliability and service.

Evolving market opportunities always has been part of our corporate philosophy. Since 2012 Bornemann has been a part of ITT Corporation with its headquarters in White Plains, NY, a partner who supports growth by sales and technology without compromising.

Looking forward

The future at Bornemann will be focused on fulfilling the needs of our customers. We will respond to an ever-changing market with absolute quality, innovation and consistency in all areas of our business.

We are convinced that Bornemann quality will provide added value for all of our customers worldwide.

Bornemann has achieved and secured a leading position worldwide with its numerous ground-breaking pump developments over the decades. Our pumps and systems are the ideal solution for tank terminals, oil production and processing. The areas are the industrial, petrochemical, marine and shipbuilding as well as the food and pharmaceutical industries. We are also a leader in the field of Multiphase and Subsea Technology. Systematic research and development will lead to innovative solutions for the future.

About ITT

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for the energy, transportation and industrial markets. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life. Founded in 1920, ITT is headquartered in White Plains, N.Y., with employees in more than 35 countries and sales in a total of approximately 125 countries. The company generated 2012 revenues of \$2.2 billion. For more information, visit www.itt.com.



Onshore Terminal in India

Customer satisfaction as part of the company strategy

Honest and constructive relationships with clients, employees and suppliers are essential to our strategy and represent the foundation of our company culture. Bornemann's policy is to be an innovative, qualified and reliable partner to its customers every step of the way while providing a truly unique service.

The needs of our customers are the focus of our research and development, manufacturing, sales and service.

Another very important factor in Bornemann's success are our

employees, whose dedication and qualifications are constantly being cultivated. Environmentally-friendly manufacturing combined with an above-average occupational health and safety policy for employees at all of our facilities are vital to the Bornemann culture.

Bornemann is active on an international level

Nearly 100 worldwide subsidiaries and offices guarantee fast and professional support in all phases of our work with you.

Focus on customer satisfaction

In addition to product quality, reliable and competent service is the decisive factor in customer satisfaction. Our service team therefore looks after each installation with its full dedication and attention. From the very beginning of the installation, Bornemann pumps and systems are accompanied by a capable service. Advisory and supporting. Expeditiously and friendly. Dedicated and reliable. No matter what service a user needs – the Bornemann service team provides you with individually tailored consultation, documentation, delivery of spare parts, maintenance, repair, retooling, exchange, general overhaul, and more.

Wherever in the world Bornemann pumps and systems are in use: the Bornemann service is available.

Bornemann pumps are available from stock for different fields of application. In addition to this, specific pump types are available in single components and can be combined individually corresponding to their application and operating conditions. Here as well we grant you full guarantee and a quick availability.

With experienced specialists, the Bornemann logistics team handles the complete shipment of all products world-wide and is also responsible for the import of all purchased products from consumables through to machines.



Subsea – the resources are in the ocean



Quality service guarantees your investment

Selected applications

Tank terminals



Country: U.A.E.
 Pump type: W9
 Medium: Fuel oil, 55°C / 130°F, 380 cSt
 Capacity: 120 - 1,400 m³/h
 530 - 6,200 gpm
 Pressure: 10 bar / 145 psi
 Speed: 200 - 1,470 rpm
 Shaft power: 95 - 630 kW / 128 - 848 HP

Refinery



Country: Germany
 Pump type: W7T
 Medium: Molasses, 220 - 250°C
 430-480 °F, 350 cSt
 Capacity: 110 - 240 - 370 m³/h
 480 - 1,060 - 1,600 gpm
 Pressure: 11 bar / 160 psi
 Speed: 600 - 1,200 - 1,800 rpm
 Shaft power: 190 kW / 256 HP

Offshore



Country: Germany
 Pump type: MPC 268
 Medium: Fluid Multiphase Mixture
 Capacity: 610 m³/h / 2,686 gpm
 Pressure: 25 bar / 363 psi
 Speed: 1,765 rpm
 Shaft power: 450 kW / 612 HP
 Gas content: 99 %

Marine



Country: China
 Pump type: W7
 Medium: Crude oil, 85°C / 185°F, 130 cSt
 Capacity: 210 m³/h / 950 gpm
 Pressure: 8 bar / 120 psi
 Speed: 1,450 rpm
 Shaft power: 70 kW / 95 HP

Oil production



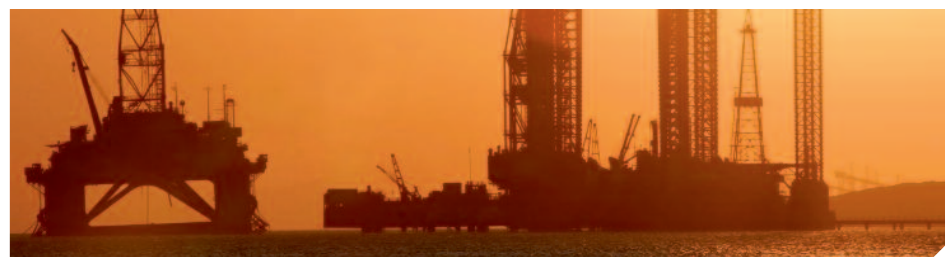
Country: Russia
 Pump type: MPC 208
 Medium: Fluid Multiphase Mixture
 Capacity: up to 500 m³/h,
 75,757 BPD
 Pressure: 21 bar/ 305 psi
 Speed: 2000 rpm
 Shaft power: 276 kW/370 HP
 Gas Content: 96 %

Chemical



Country: Germany
 Pump type: W7
 Medium: Water, solvent, silicon acrylate, polyether, 20 - 130°C / 70-270°F, 1-15,000 cSt
 Capacity: 4 - 100 m³/h
 18 - 440 gpm
 Pressure: 1 - 5 bar / 14 - 73 psi
 Speed: 300 - 1,400 rpm
 Shaft power: 55 kW / 74 HP

Unique solutions for all industries



Oil & Gas

As displacement pumps, Bornemann twin screw pumps are ideal for pumping mixtures of crude oil, gas, water and the finest solids. They can be used onshore, offshore and subsea. The dry running capability also allows the presence of gases. The compact construction and the special profile of the feed screws allow high conveying pressures for operation in pipelines with long distances.

Multiphase boosting technology

The core of the multiphase boosting systems is formed by the twin screw pumps. The two engineered rotor sets work with no metal-to-metal contact. They deliver a close to constant capacity against the downstream backpressure. The pressure is not dependent on the speed of the pump and the characteristics of the fluid being transferred. Fluid mixtures of up to 97% gas content, 100% on short term basis, may be pumped without overheating the machine. The necessary liquid is stored in the enlarged housing and partly recirculated to the inlet, assuring an equal

distribution of the heat and heat transfer to the ambience. Sudden changes from high gas contents to pure liquid flow – normally called slugs – are handled. The patented technical design in connection with outstanding solutions in details guarantee highest availability with minimized maintenance necessary.

Bornemann multiphase boosting systems are applicable for oil- and gasfields

- on- and offshore
- with small discharge capacities
- with tail-end production
- new field developments,
- aside of the existing infrastructure, where an exchange of separators and associated equipment is required

No restrictions are applicable for geographical or extreme ambient conditions. Bornemann Pumps conform to API 676.

Product applications: Crude oil with gas and water, very heavy crude oil, thermal operations, wet gas compression



Marine

Bornemann twin screw pumps have proven their value internationally as loading pumps on tankers, transfer pumps for heavy-duty HFO qualities and as lubricating pumps for supplying the main engine. Bornemann progressive cavity pumps are used as sludge pumps, bilge pumps, as pumps to feed oil extractors, and as residue pumps.

Product applications:

Low to very high viscosity oil products such as bitumen, tar, chemicals, light and heavy fuel oil, crude oil, mazut and storage water

Tank terminals

Bornemann has a large worldwide installed base of pumps in tank terminals. They can be used wherever a large suction capacity is required. Bornemann pumps can be found for loading and unloading of ships, tank wagons, tanker trucks as well as storage tanks and pipelines everyday of the year. They perform these duties under challenging conditions including high viscosities and pressures.

Product applications:

Low to very high viscosity oil products such as bitumen, tar, chemicals, light and heavy fuel oil, crude oil, mazut and storage water

Petrochemical Industry / Refinery

Bornemann twin screw pumps are the ideal solution for transfer within terminals where both low and high viscosity products have to be moved or metered. All fluids whether neutral, alkaline or acid and aggressive, abrasive or gaseous are sucked up safely, dosed and pumped.

Product applications:

Mazut, bitumen, tar, heavy fuel, naphta and chemical products

Industry

Bornemann twin screw pumps and progressive cavity pumps solve a variety of conveyance challenges in a range of industries including chemicals, power generation, wastewater and environmental technology, and construction. Regardless of low or high viscosity, or aggressive, solid or shear-sensitive materials – there is an appropriate pump for nearly every application. All Bornemann pumps are self-priming and ATEX-compliant.

Product applications:

Polymers, paints, slurry, pastes, liquid sulfur, and chemical process pumps

Food & Pharma

The twin screw pump SLH has been especially developed for the application in the Food and Pharmaceutical Industry. The 2-in-1 principle conveys and cleans in 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.

Field of application:

Beverage industry, convenience, dairy products, sweets, meat products and pharmaceutical industry



Nearly 80 pumps in operation

Proven pump solutions

Twin screw pumps

Bornemann twin screw pumps - Proven pump solutions in a range of industries for nearly any medium

Bornemann twin screw pumps are rotating displacement pumps; the gear-wheels and roller bearings are outside the pump space. Around 80 models are available. Various materials, sizes and forms make application-optimized solutions possible.

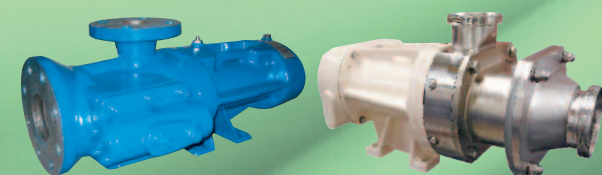
Bornemann pumps cover a wide range of performance in the pressure, conveyed volume, temperature and viscosity of the conveyed media. Nearly all media can be conveyed, i.e. thin liquids such as petrol, hydrocarbons, seawater, liquids with high viscosity such as bitumen, tar, glue, molasses, and aggressive media such as acids and bases.

	Capacity		Differential pressure		Viscosity	Max. Product temperature	
	m³/h	gpm	bar	psi	mm²/s cSt	°C	°F
W/V universal pump	10 - 2,800	50 - 12,300	up to 40/60	up to 600/900	0,5 - 200,000	up to 350	up to 660
HC/VHC high capacity pump	up to 4,500	up to 19,800	up to 16	up to 230	1 - 20,000	up to 120	up to 250
HP high pressure pump	20 - 1,500	100 - 6,600	up to 100	up to 1,500	1 - 10,000	up to 120	up to 250
SLI compact pump	up to 180	up to 790	up to 16	up to 230	up to 100,000	up to 120	up to 250
SLH hygienic pump	up to 180	up to 790	up to 16	up to 230	up to 100,000	up to 130	up to 270

W/V universal pump HC/VHC high capacity pump HP high pressure pump



SLI compact pump SLH hygienic pump



Advantages

- Self-priming
- High viscosities possible
- Low pulsations
- Low noise level
- Dry running possible
- Constant flow at varying pressures and volumes
- Suction lift up to 8.5 m (25 feet)

Twin screw pumps

Bornemann multiphase pumps - from pumps to systems to solutions

Complete multiphase pumping systems

With our experience in research & development, engineering, production and commissioning all over the world we are able to supply complete system solutions – for a wide range of performance conditions and harsh ambient environmental conditions.

„Plug and pump“

The skid mounted pump is equipped with all necessary instrumentation and transformer cabinets. You will get a complete system incl. electrical drive system with motor, variable frequency converter and transformer cabinets will undergo a complete system factory acceptance test prior to shipment.

Safety first!

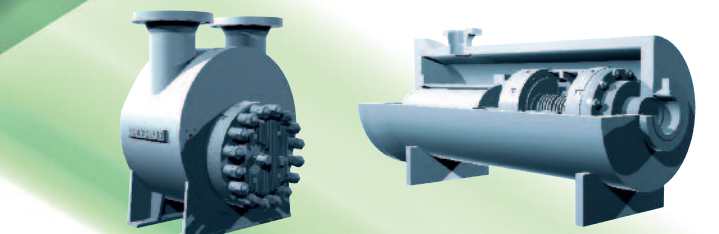
The Bornemann system guarantees full safety and automatic operation under all circumstances.

	Capacity		Differential pressure		Viscosity	Max. Product temperature	
	m³/h	BPD	bar	psi	mm²/s cSt	°C	°F
MSL single well multi-phase pump	1 - 110	137- 16,800	up to 16	up to 230	1 - 500,000	up to 160	up to 320
SLM single line multi-phase pump	1 - 130	150 - 20,000	up to 16	up to 230	1 - 500,000	up to 100	up to 210
MW classic multiphase pump	1 - 8,000	up to 1,206,000	up to 50	up to 725	1 - 500,000	up to 160	up to 320
MPC multi-phase pump compressor	1 - 8,000	up to 1,206,000	up to 70	up to 1,000	1 - 500,000	up to 160	up to 320
SMPC subsea multiphase pump compressor	1 - 8,000	up to 1,206,000	up to 70	up to 1,000	1 - 500,000	up to 160	up to 320

MSL single well multiphase pump SLM single line multiphase pump MW classic multiphase pump



MPC multiphase pump compressor SMPC subsea multiphase pump compressor



Progressive cavity pumps

Bornemann progressive cavity pumps are compact, rugged and powerful

Progressive cavity pumps are used to convey a wide range of media, in particular highly viscous and abrasive materials such as slurry, liquid manure, crude oil and greases. They are available in various power ratings and combinations of materials.

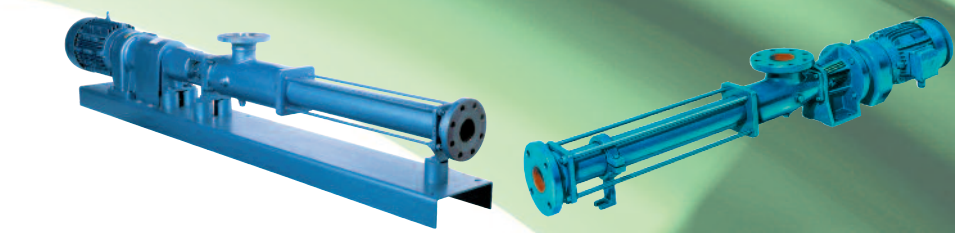
They have proved their value worldwide in public and industrial waste water treatment and in waste disposal. They are an optimum solution to conveying tasks in the chemical and petrochemical industries, the food, cosmetics and paper industries, in building construction, mining and general industry – everywhere the conveyed product is too viscous and flows too poorly to be pumped by other types of pumps.

Advantages

- Gentle conveying
- Continuous pulsation free transfer
- Capable of metering
- Rugged and long life
- Standard pumps
- Individual shaft sealing
- Suitable for application anywhere
- Suction lift up to 8.5 m (25 feet)
- Solid particle size < 75 mm

	Capacity		Differential pressure		Viscosity	Max. Product temperature	
	m³/h	gpm	bar	psi	mm²/s cSt	°C	°F
EH universal pump	1 - 300	4 - 1,320	up to 24	up to 360	1 - 1,000,000	up to 140	up to 280
EL compact pump	1 - 80	4 - 350	up to 12	up to 180	1 - 1,000,000	up to 140	up to 280
EU submerged pump	1 - 300	4 - 1,320	up to 24	up to 360	1 - 1,000,000	up to 140	up to 280
EP high pressure pump	1 - 45	4 - 200	up to 80	up to 1,160	1 - 1,000,000	up to 140	up to 280

EH universal pump EL compact pump



EU submerged pump EP high pressure pump



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