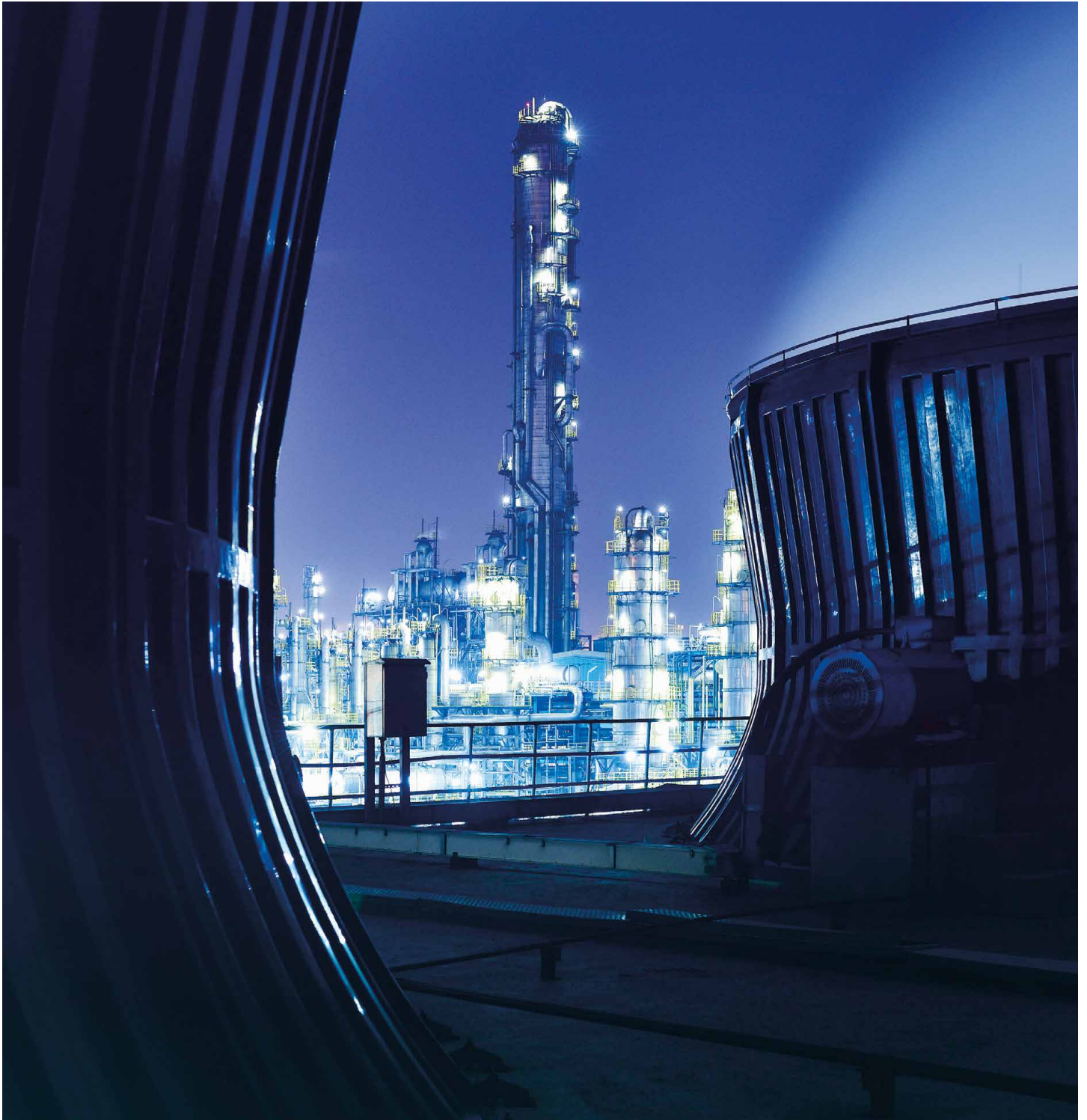


# Bornemann Pumps and More

## Introducing a Global System Partner



# ITT Bornemann - The Pump Pioneer

## About Bornemann

Founded in 1853, German-based Bornemann has achieved and secured a leading position worldwide with its numerous ground-breaking pump developments over the decades. Besides energy, several industries are served, i.e. chemical, petrochemical and marine as well as food & pharmaceutical applications. Systematic research and development are leading 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 modern way of life. Founded in 1920, ITT is headquartered in Stamford, CT - USA, with employees in more than 35 countries and sales in a total of approximately 125 countries.

## Customer Satisfaction as Part of the Company Strategy

Fair and constructive cooperation with clients, employees and suppliers is essential to our strategy and represent the foundation of the 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.

Product quality, reliability and competent services are the decisive factors for customer satisfaction. From the very beginning of the installation, Bornemann Pumps and Systems are accompanied by capable services. ITT Bornemann's Service Team provides 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, Bornemann services are available.



*Onshore Terminal in India*

# Unique Technologies

## Customized Reliability

With the benefit of more than 80 years proven experience, Bornemann offers customized performance solutions for every operation. In-house design, production and 100% workshop testing guarantee the high performance technology – essential for all addressed industries.

## Design & Performance

Bornemann Twin Screw Pumps are highly refined versions of the positive displacement principle, employing patented machining processes for the screw manufacture. Performance is a function of screw diameter, pitch and speed. In addition, there are special screw geometries available to give further efficiency savings of up to 25%.



Multiphase „Boosting in Libya“

# Industries and Applications

## Energy

Bornemann Twin Screw Pumps are ideal for pumping mixtures of crude oil, gas, water and solids. They can be used onshore and offshore. Dry running capabilities also allow the presence of gases. Compact design and special screw profiles allow high  $\Delta p$  for operation in pipelines with long distances.



**Product Application:** Multiphase & crude oil transport, thermal operations, wet gas compression, oil & chemical storage.

## Petrochemical Industry / Refinery

Bornemann Twin Screw Pumps transport low & high viscous products within terminals & refineries. All kinds of fluids, neutral, alkaline or acid and aggressive, abrasive or gaseous, are primed up safely, metered and pumped.



**Product Application:** Mazut, bitumen, tar, heavy fuel, naphtha and chemical product

## Marine

Bornemann Twin Screw Pumps have proven their value internationally as loading and transfer pumps on tankers, transfer pumps for heavy-duty HFO qualities and as lubricating pumps for main engine supply.



**Product Application:** Bitumen, tar, light and heavy fuel oil, crude oil, mazut, chemicals & storage water

## Chemical & General Industry

Regardless of low or high viscosity, aggressive, solid or shear-sensitive – twin screw pumps from Bornemann are used in any kind of chemical process. All Bornemann pumps are self-priming and ATEX-compliant.



**Product Application:** Beverages, dairy products, convenience, sweets, meats, personal care, cosmetics, pharmaceuticals

## Hygienic Industry

Bornemann SLH-series has particularly been developed for applications in the Hygienic Industry. The 2-in-1 principle conveys and cleans in one pump.



**Product Application:** Beverages, dairy products, convenience, sweets, meats, personal care, cosmetics, pharmaceuticals

# Twin Screw Pumps Series

## Twin Screw Pumps

Bornemann Twin Screw Pumps are rotating positive displacement pumps. Gearwheels and roller bearings are located externally without contact to the process liquid. Their design characteristics include double and single volute flow, no metal contact of the pumping elements during operation and the ability to self-prime. Flow can be reversed simply by changing the direction of rotation. Bornemann pumps are covering a wide range of performance in pressure, flow, temperature and viscosities of the conveyed products, the portfolio covers more than 80 different models with various materials, sizes and designs for application - tailored solutions. Bornemann offers pump types that are approved for conveyance of flammable mixtures, ATEX Zone 0 inside certification available.



**SLH-5G**



**HC**



**W**



**VHC**



**HP**



**SLW**



**SLI**

	Max. FLOW		Max. Differential Pressure		Max. Viscosity		Max. Product Temperature	
	m <sup>3</sup> h	gpm	bar	psi	mm <sup>2</sup> /s	cSt	°C	°F
<b>W/V</b>	2.800	12.300	40	600	200.000		350	660
<b>HC/VHC</b>	6.000	26.400	16	230	20.000		120	250
<b>HP</b>	1.500	6.600	100	1.500	10.000		120	250
<b>SLH-5G</b>	250	1.100	25	360	1.000.000		180	350
<b>SLW</b>	1.000	4.400	40	580	100.000		300	572
<b>SLI</b>	180	790	16	230	100.000		120	250

# Multiphase Twin Screw Pump Series



**MSL**



**MW**



**MPC**

## Multiphase Pumping Systems

Highly experienced in research & development, engineering, production and commissioning all over the world, Bornemann is able to supply complete system solutions - for a wide range of performance parameters and harsh ambient environmental conditions.

## „Plug and Pump“

The skid mounted pump is equipped with all required instrumentation, piping and valves for safe operation. Operators are getting complete systems incl. electrical drive, variable frequency converter and control system. It will undergo a complete system factory acceptance test prior to shipment, thus saving time while commissioning.

	Max. Flow		Max. Differential Pressure		Max. Viscosity		Max. Product Temperature	
	m <sup>3</sup> h	gpm	bar	psi	mm <sup>2</sup> /s	cSt	°C	°F
<b>MSL</b>	110	16.800	16	230	100.000		160	320
<b>MW</b>	8.000	1.206.000	50	725	100.000		160	320
<b>MPC</b>	8.000	1.206.000	110	1.600	100.000		160	320

## User Advantages - Made by Bornemann

- Self-priming
- Safe operation at high viscosities
- Low pulsations
- Low noise level
- Dry running possible
- Constant flow at varying pressures and volumes
- Suction lift up to 8.5 m (25 feet)
- Long life / low operating costs
- ATEX Zone 0 inside certification available

# Selected Applications

## Tank Terminals



Country: U.A.E.  
 Pump Type: W9  
 Medium: Fuel Oil, 55 °C/130 °F,  
 380 cSt  
 Capacity: 120-1,400 m<sup>3</sup>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: Bitumen, 220-250 °C/  
 430-480 °F, 350 cSt  
 Capacity: 110-240-370 m<sup>3</sup>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 m<sup>3</sup>h/2,686 gpm  
 Pressure: 25 bar / 363 psi  
 Speed: 1,765 rpm  
 Shaft Power: 450kW / 612 HP  
 Gas Content: 99 %

## Marine



Country: China  
 Pump Type: W7  
 Medium: Crude Oil, 85 °C/185 °F,  
 130cSt  
 Capacity: 210 m<sup>3</sup>h / 950 gpm  
 Pressure: 8 bar / 120 psi  
 Speed: 1,450 rpm  
 Shaft Power: 70 kW / 95 HP

## Oil Production



Country: India  
 Pump type: MPC10  
 Medium: Multiphase (Oil, water  
 and gas)  
 Capacity: 365 MBEP / 2500 Sm<sup>3</sup>/h  
 Pressure: 50psiG - 230psiG  
 Speed: 500 – 1800 Rpm  
 Shaft power: 1200kW/ 1500 BHP

## 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 m<sup>3</sup>h  
 Pressure: 1-5 bar / 14-73 psi  
 Speed: 300-1,400 rpm  
 Shaft Power: 55 kW / 74 HP



**ITT Bornemann GmbH**  
Industriestrasse 2  
31683 Obernkirchen  
GERMANY  
Tel: +49 5724 390-0  
info.bornemann@itt.com  
www.bornemann.com



 **Bornemann**

— An ITT Brand