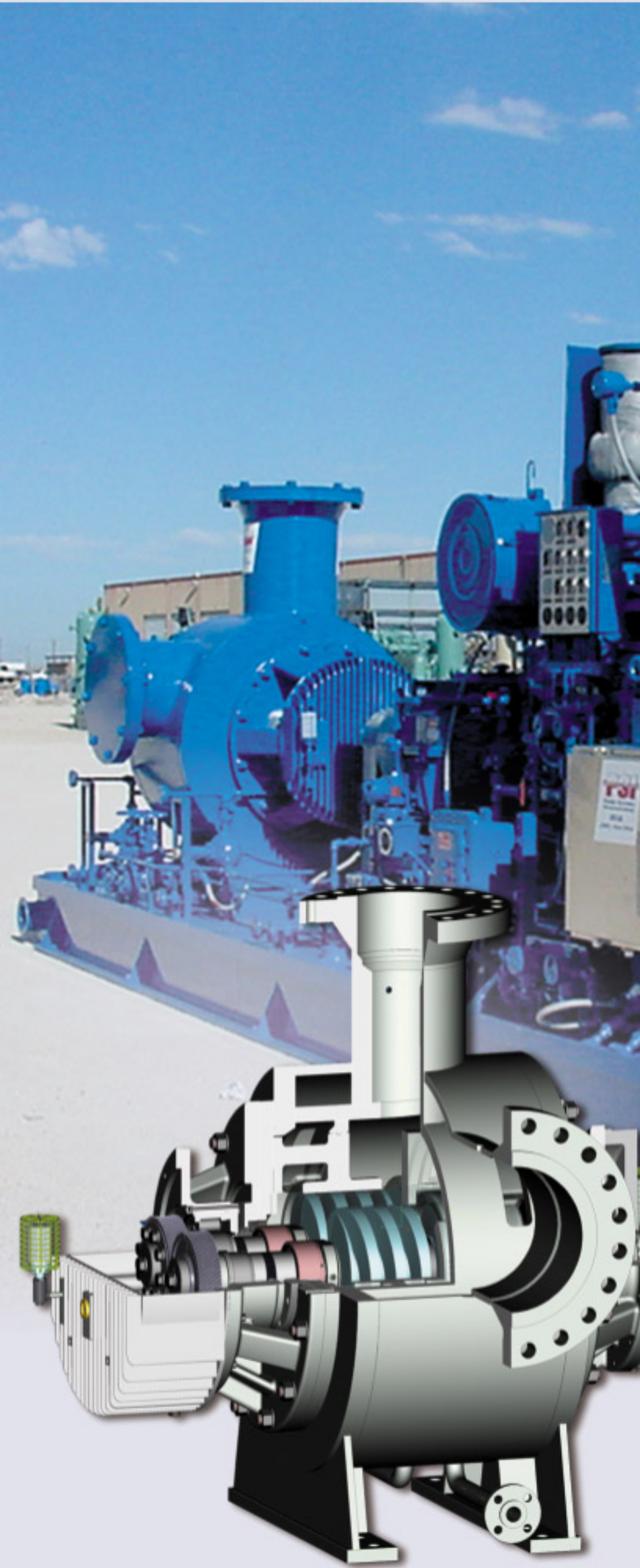


# Pumps and Systems

## Twin Screw Pumps



Bornemann is the market leader for twin-screw and multiphase pumps and one of the highest performing manufacturers of eccentric screw pumps, which are characterised by their ruggedness and power.

The company has supplied pumps and pump units to Europe, the Eastern Europe, Asia, Central Asia, North and South America for many years: - everywhere where crude oil, particularly heavy crude oil, hydrocarbons and chemicals are processed.

## Twin Screw pumps

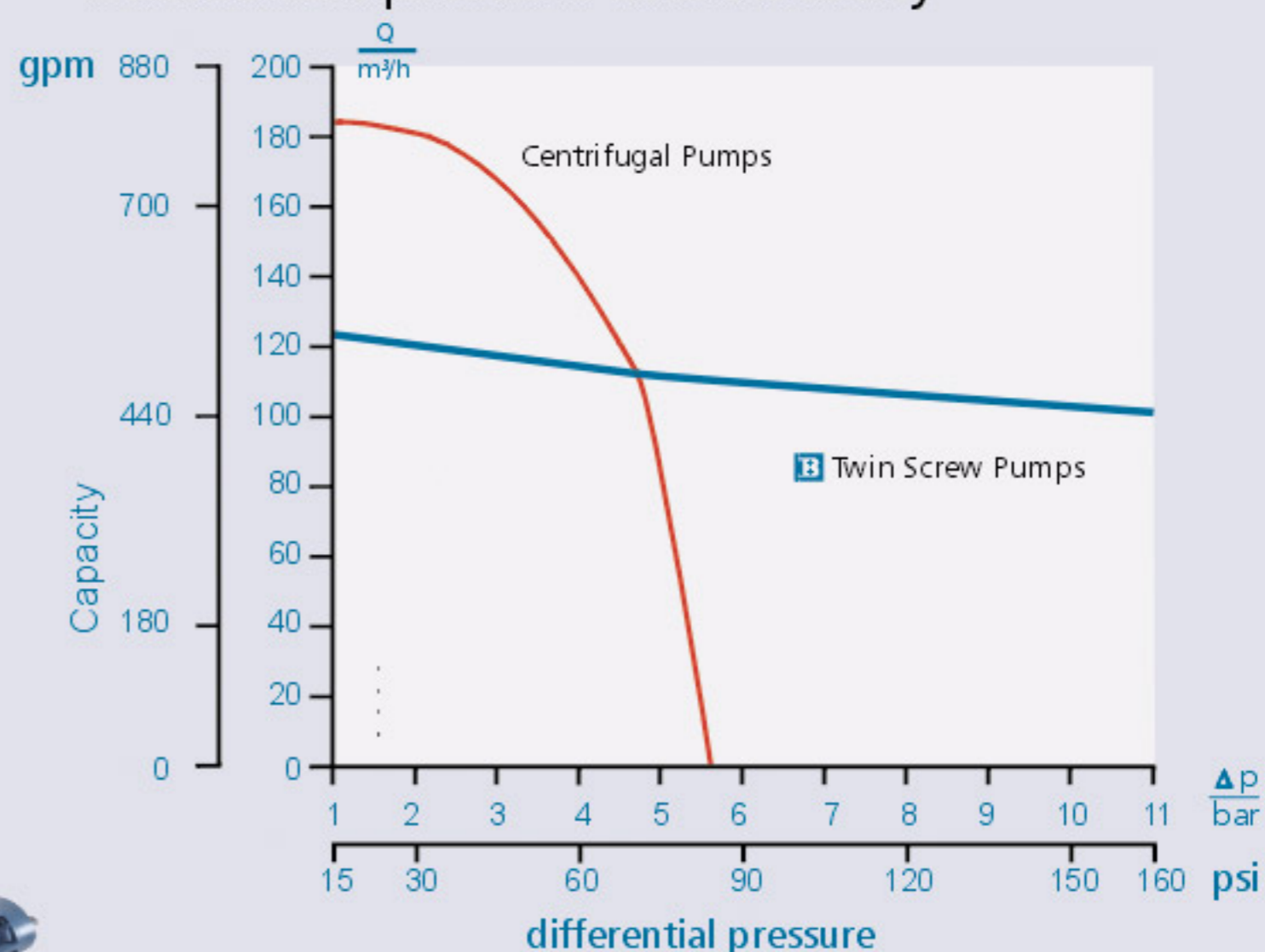
### General

Bornemann twin screw pumps are rotating displacement pumps; the gearwheels and roller bearings are outside the pump space. Around 80 models are available. Various materials, sizes and forms make application-optimised solutions possible. Nearly all media can be conveyed. Thin liquids such as petrol, hydrocarbons and seawater, liquids with high viscosity such as bitumen, tar, glue, molasses, and aggressive media such as acids and alkalines.



### Advantages for the user

- Self-priming
- Excellent suction characteristics up to NPSH 1-1.5 m
- High viscosity possible
- Low pulsation
- Low noise level
- Dry running possible
- Conveyed volume almost constant at fluctuation pressure and viscosity



Bornemann pumps cover a wide range of performance in the pressure, conveyed volume, temperature and viscosity of the conveyed media. In comparison with centrifugal pumps, Bornemann pumps are suitable for practically all media thin liquids, highly viscous, non-lubricating, neutral or aggressive.

Technical Data/Ranges		W universal pump	HC low pressure pump	HP high pressure pump	SL compact pump
Capacity	[m³/h]	10 - 2.800	up to 1.000	20 - 1.300	up to 100
	[gpm]	50 - 13.000	up to 4.600	100 - 6.000	up to 500
Diff. Pressure	Δp [bar]	up to 40/60	up to 16	up to 100	up to 16
	[psi]	up to 600/900	up to 250	up to 1.500	up to 250
Viscosity	$\frac{[mm^2/s]}{[cSt]}$	0,5 - 200.000	1 - 20.000	1 - 10.000	up to 100
Product Temp. max	[°C]	up to 350	up to 100	up to 150	up to 120
	[°F]	up to 650	up to 210	up to 300	up to 250

## Branches



### Oil drilling

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 both onshore and offshore. The dry running capability also allows the admixture of gases. The short construction and the special profile of the conveying screws allow high conveying pressures for operation in pipelines.

Product applications: crude oil with gas and water components, very heavy crude oil, ...



### Tank terminals

Bornemann pumps have a wide field of application in tank storage plants. They can be employed at all places where a high suction capability is required.

Loading and unloading of ships, rail tankers, road tankers and conveying into storage tanks is just as possible as extraction from tanks, even with high viscosity and long pipes.

Product applications: low to very highly viscous oil products such as bitumen, tar, chemicals, light and heavy fuel oil, crude oil, mazut, ...



### Petrochemicals/refineries

Bornemann twin screw pumps and eccentric screw pumps ideally execute conveying tasks in machinery in which low and highly viscous products are conveyed. All media neutral, alkaline or acid, aggressive, abrasive or gaseous are impelled, metered and pumped reliably.

Product applications: mazut, bitumen, tar, heavy fuel oil, ...



### Chemicals industry

Bornemann pumps offer decisive advantages for applications in the chemicals industry. Due to the non-contact running of the conveying elements, it is possible to manufacture all parts in contact with the medium in stainless steel. Non-lubricating, corrosive, thin and highly viscous liquids can be conveyed.

Bornemann pumps are also particularly suitable for structurally viscous, thixotropic liquids which are sensitive to shear forces and require gentle pumping.

Product applications: polymers, liquid sulphur, ...



Pumps and Systems for Industry,  
Enviromental and Shipbuilding

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Good communication with our customers is an important feature in Bornemann's Quality Program, from initial project consultation to maintenance. Professional support and fast service are top priorities. Specialists in pumps and systems located in our company headquarters and in nearly 100 representatives

and agencies through the world provide professional quality support on a local level. Our employees and representatives are trained at our training center in order to stay current on new technologies and provide the best support available to our customers.

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