

— An ITT Brand

PLASTIC PUMPS RCNku⁺

Horizontal chemical standard pumps

DIE RCNku⁺

ONLY THE BEST OF THE BEST

Our plastic pumps are specially designed for safety, reliability and flexibility. We have enhanced these strengths and combined them into one product.

The result is clear to see: economic efficiency, serviceability and durability come together in the RCNku⁺.

Many years of experience with a high level of innovation are reflected in this contemporary series.



COST EFFECTIVENESS THROUGH THE NEW RHEINHÜTTE DESIGN

The RCNku⁺ also offers optimisations in terms of economy: When designing the RCNku⁺, the focus was on increased efficiency. To facilitate efficient spare parts stocking, our developers paid close attention to the standardisation of components.

In addition, the optimised hydraulic system design provides operating cost benefits arising from the associated high efficiencies and low power consumption. With the RCNku⁺ we focus on a high level of operational reliability through intelligent design details.



SERVICEABILITY THE MECHANICAL SEAL RHETA

Our mechanical seal RHETA is a highlight of this series. It can be mounted quickly and smoothly for maintenance and servicing purposes.

In addition, the simple mechanical seal offers a cost-effective solution for regular rinsing, as service rinsing is integrated into the design of the CS product.

LONG SERVICE LIFE THROUGH INNOVATIVE MATERIALS

An innovative choice of materials ensures high corrosion resistance.

To guarantee a long life cycle, we decided to use optimum materials: the selection was based on solid plastic parts, a robust bearing and a metal-free mechanical seal.

THE RCNku⁺ AT A GLANCE

1 SPIRAL CASING

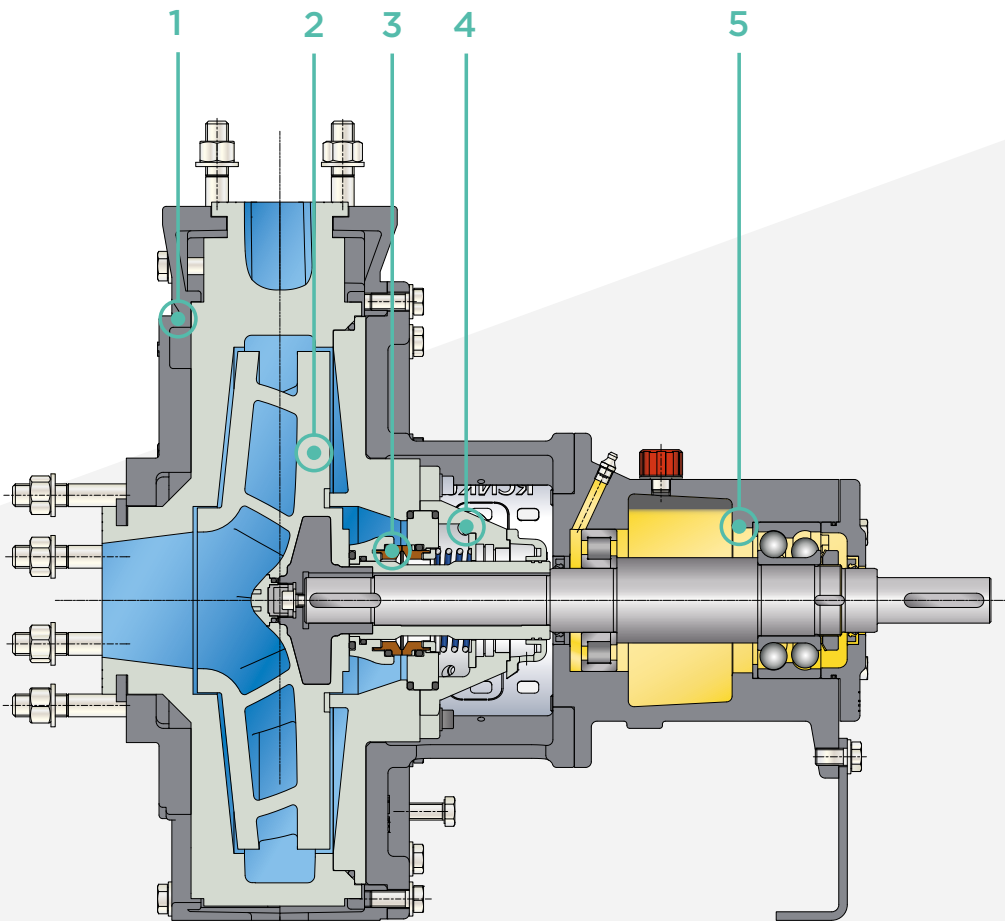
This robust spiral casing was developed on the basis of a CFD simulation. This allows an optimal assessment of the hydrodynamic power of the pump and the resulting pump capacity. The **solid plastic parts** of the housing are resistant to wear and thus durable.

2 IMPELLER

All wheels are available in the plastics PP, PE 1000, PE 1000R or PVDF. Even with increased solids content in the medium, the impeller manages the conveying tasks without difficulty due to the optional back vanes.

3 MECHANICAL SEAL

The **mechanical seal RHETA** is made of innovative materials that ensure a **long service life**. All parts in contact with media are metal-free and made of durable plastic. Can be used for API Plans 52/53A/54 and 62.

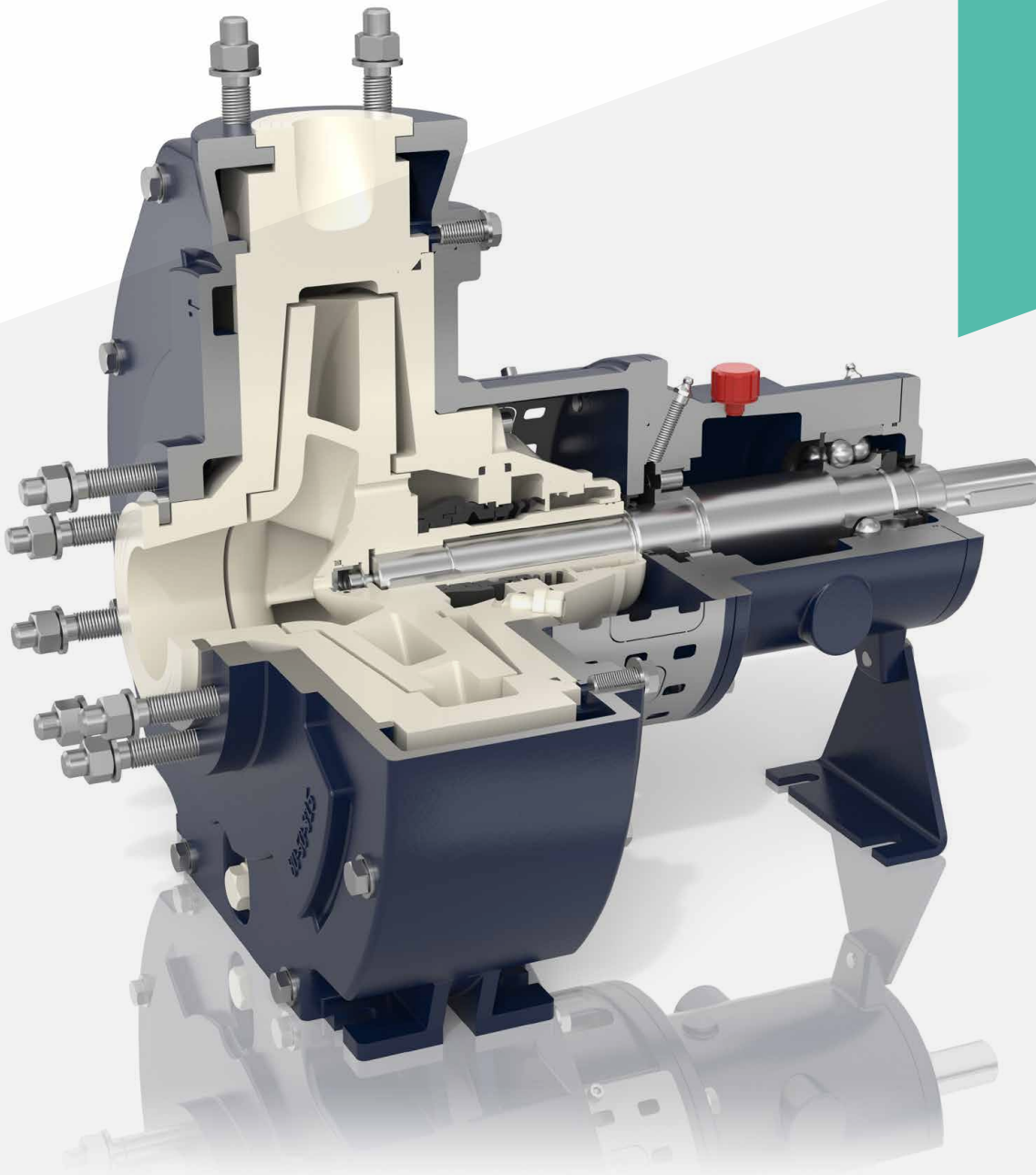


4 RINSING CONNECTIONS

Service rinsing is included in the standard CS design. It conveys the liquid upwards and can be executed in the installed condition.

Versions:
PP, PE 1000,
PE 1000R and PVDF

DIN EN 22858
ISO 2858
ISO 5199



5 BEARING BRACKET

Even in the standard version, the robust bearing bracket features continuously lubricated antifriction bearings with high load ratings. A rigid shaft material ensures **low vibration even in unfavourable operating conditions**.

The drawings essentially correspond to the design. Subject to design changes without notice. Other design types on request.

MECHANICAL SEAL

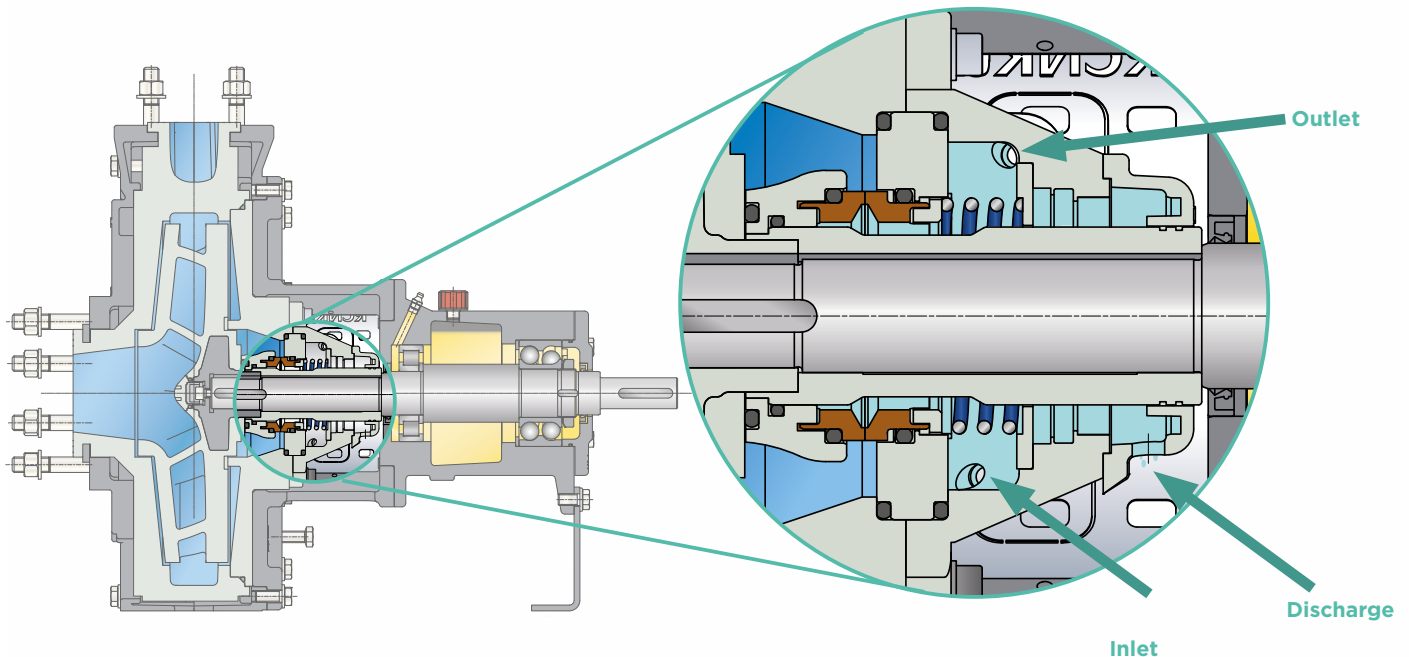
RHETA - EASY TO ASSEMBLE

We have developed a mechanical seal that stands out from other seals due to its ease of installation during maintenance and servicing. This simplicity is also reflected in the name RHETA.

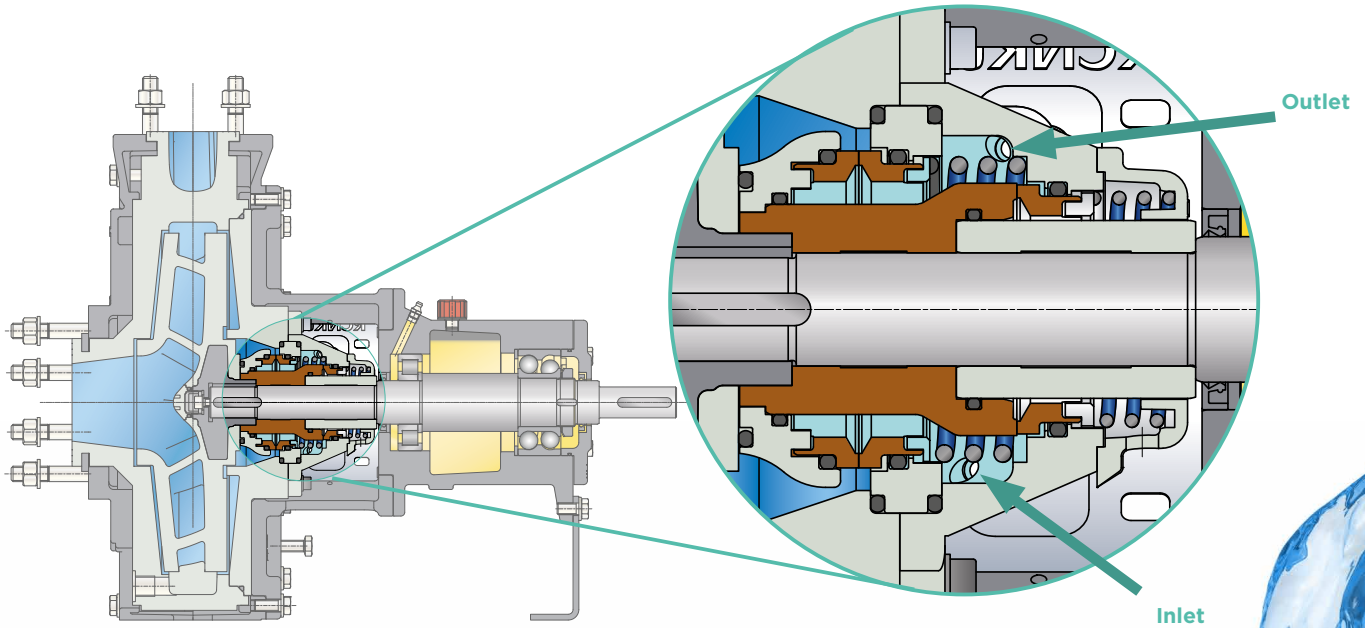
The metal-free mechanical seal RHETA is characterised by its high level of serviceability. Disassembly and assembly can be carried out quickly and easily from one side. Due to the ingenious parts concept, it is also possible to change, quickly and easily, from a single to a double-acting mechanical seal. The parts for the second mechanical seal are simply retrofitted.

RHETA consists of innovative, metal-free materials, which contribute to the long service life of the seal due to their corrosion resistance. The individual parts of the seal are made of chemically stable plastics and have a high degree of standardisation. Chambers and channels are designed to optimise flow for the respective individual rinsing concepts.

Single-acting mechanical seal CS with service rinsing



Double-acting mechanical seal CST



SERVICE RINSING AS STANDARD

Crystallisation residues and deposits can be rinsed out of the seal using different rinsing modes. Simple rinsing is possible in the standard CS design, which can be carried out during operation and standstill. So-called service rinsing takes place via the lower rinsing connection with a pressure of approximately 0.3 bar. The rinsing liquid is discharged via the upper rinsing connection (see illustration). Rinsing can be performed as often as required.

The CST seal offers a convenient solution when permanent rinsing is needed.

The end-of-work (CSR) and external (CSX) rinsing connections are provided as standard and so can be used at any time.

PLASTIC

A VARIABLE MATERIAL

The chemical centrifugal pump RCNKu⁺ is available as standard in three different plastics. Our material experts help you to choose the right material. Plastics are in particular demand in applications with high corrosion resistance requirements, in order to ensure a long pump life cycle.

PP - POLYPROPYLENE

This plastic is particularly suitable for simple, common applications. It offers outstanding performance at temperatures from 0 to 100 °C. PP has proven its worth in acids, alkalis and saline solutions as well as in hydrochloric acid pickling.

PVDF - POLYVINYLIDENE FLUORIDE

The partial fluorination of this polymer increases its chemical resistance many times over. PVDF is resistant to most solvents, acids and oxidants. PVDF is an optimum material for many applications in the chemical industry for temperatures from -20 to 130 °C.

PE 1000 (UHMWPE) - POLYETHYLENE

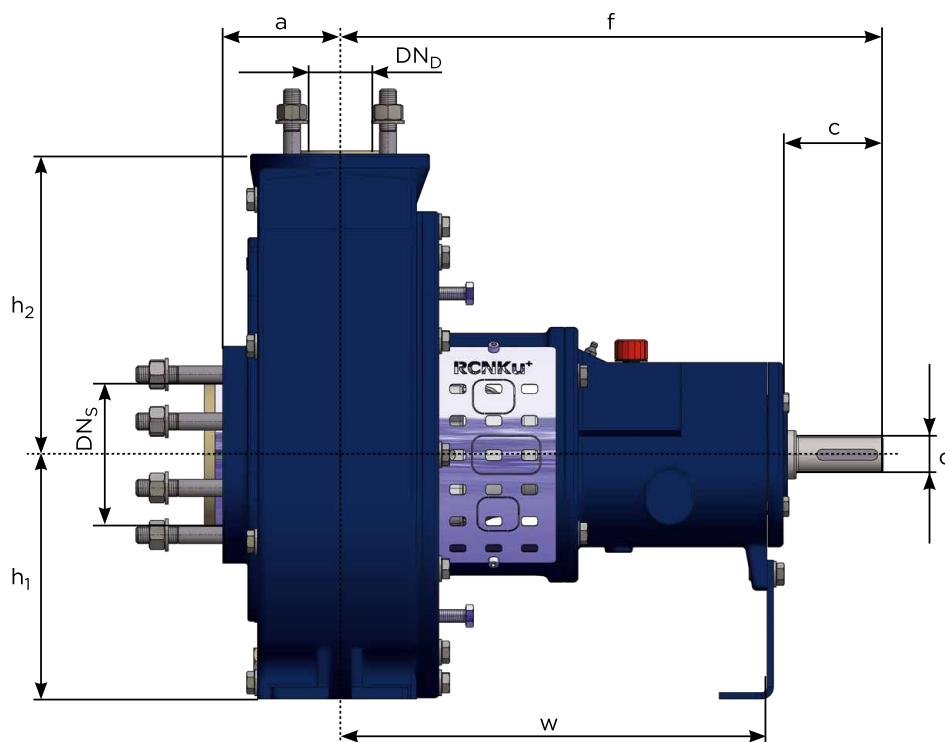
The outstanding feature of this high molecular weight polymer is its resistance to wear in case of solids in the pumped medium. There is also a wide range of corrosion resistance options. In the temperature range from -50 to +80 °C, PE 1000 is in many cases an alternative to stainless steels.

PE 1000R - POLYETHYLENE

PE 1000R is a further development of the standard polyethylene PE 1000 with wear-minimising additives for up to 30 % higher durability - for use in highly abrasive suspensions with process-related critical solids content. The material can be used at temperatures from -50 to +80 °C.



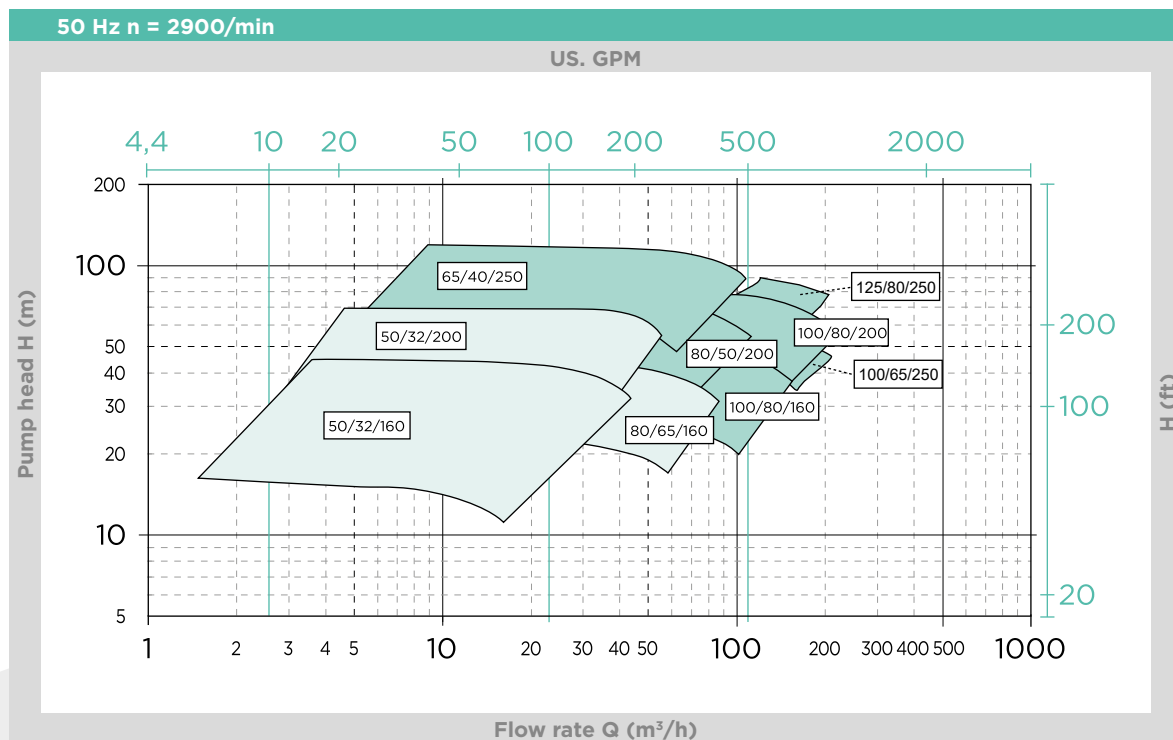
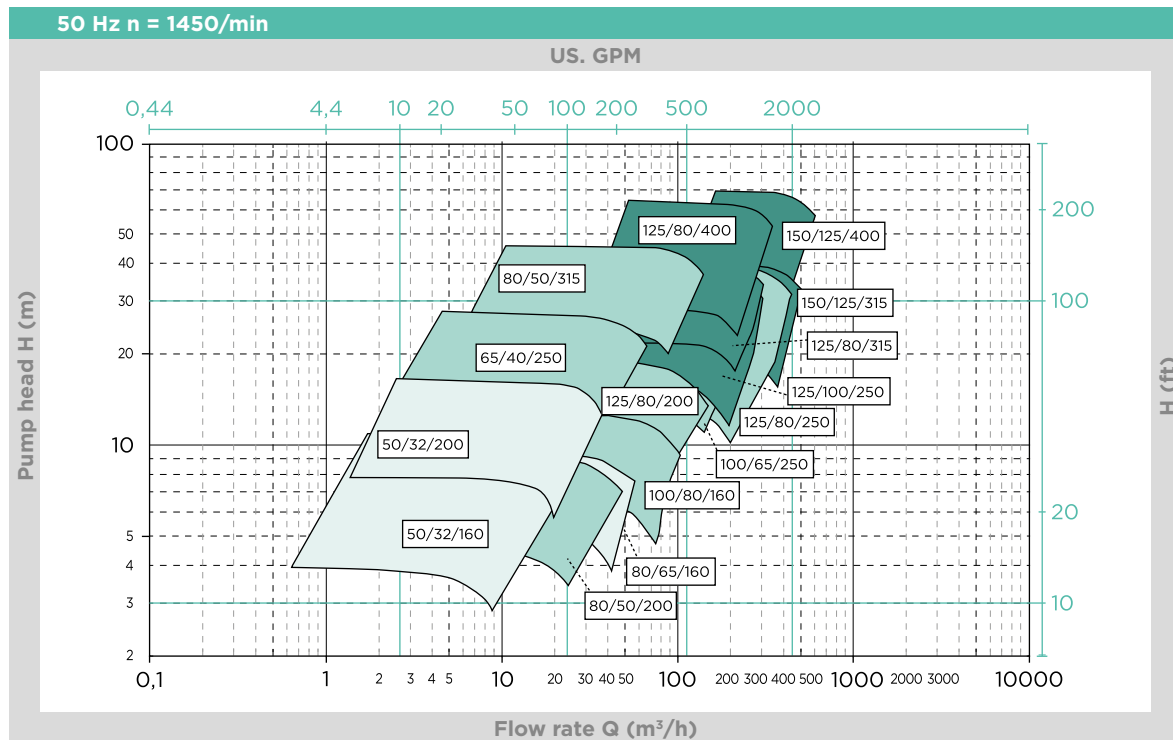
IN DETAIL INSTALLATION DIMENSIONS



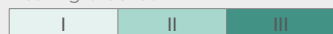
Size	BB ¹⁾	Pump dimensions				Foot size	Shaft end		Flange dimensions	
		a	f	h ₁	h ₂		w	d	c	DN _p ²⁾
50-32-160	I	80	385	132	160	285	24	50	32	50
50-32-200	I	80	385	160	180	285	24	50	32	50
80-65-160	I	100	385	160	180	285	24	50	65	80
80-50-200	I	100	385	160	200	285	24	50	50	80
65-40-250	II	100	500	180	225	370	32	80	40	65
80-50-315	II	125	500	225	280	370	32	80	50	80
100-80-160	II	100	500	160	200	370	32	80	80	100
100-65-250	II	125	500	200	250	370	32	80	65	100
125-80-200	II	125	500	180	250	370	32	80	80	125
125-80-250	II	125	500	225	280	370	32	80	80	125
125-80-315	III	125	530	250	315	370	42	110	80	125
125-80-400	III	125	530	280	355	370	42	110	80	125
125-100-250	III	140	530	225	280	370	42	110	100	125
150-125-315	III	140	530	280	355	370	42	110	125	150
150-125-400	III	140	530	315	400	370	42	110	125	150

¹⁾ BB = Bearing bracket ²⁾ DN_p = Pressure flange ³⁾ DN_s = Suction flange

IN DETAIL CAPACITY RANGES

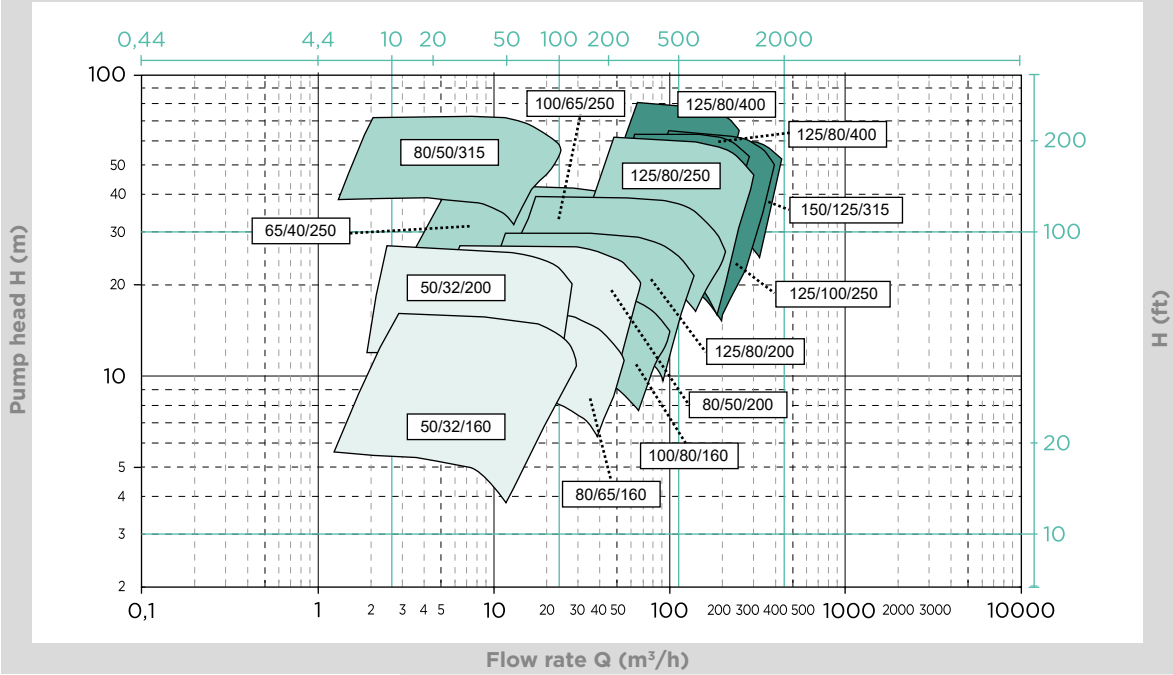


Bearing bracket



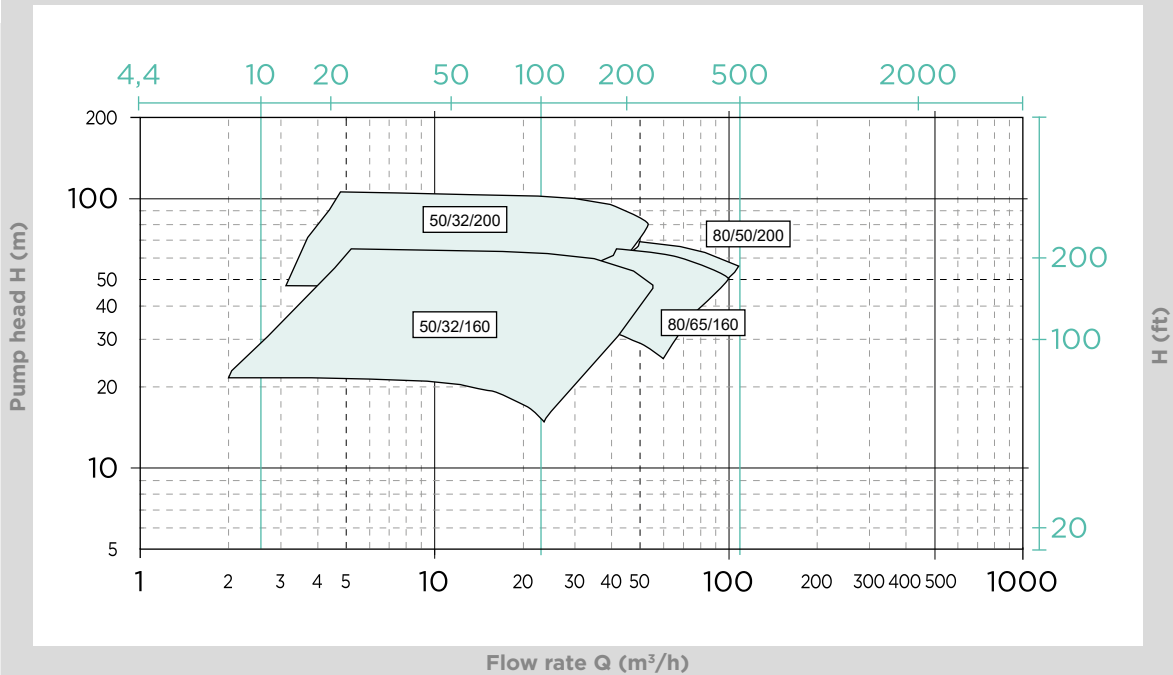
60 Hz n = 1750/min

US. GPM

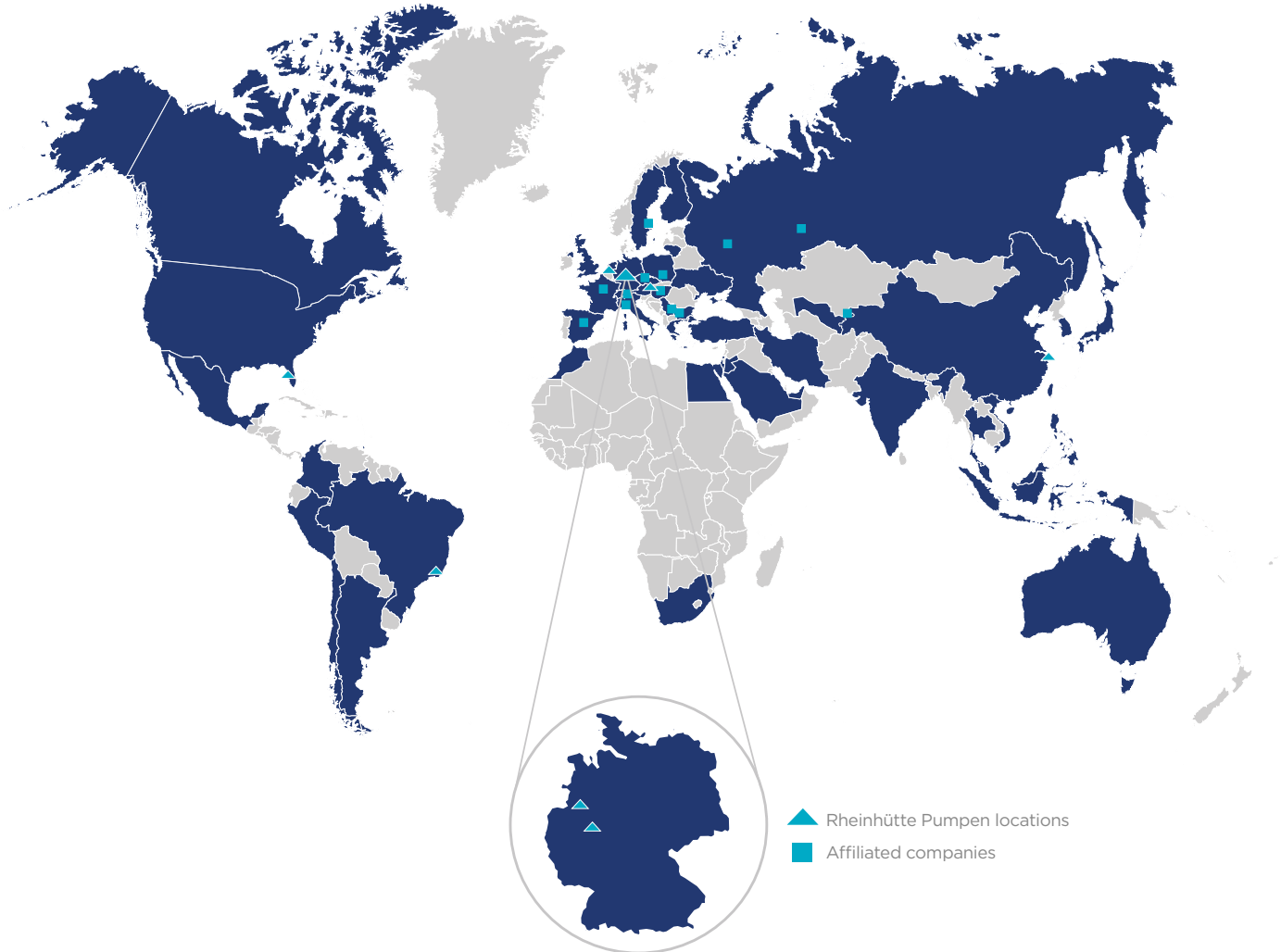


60 Hz n = 3500/min

US. GPM



RHEINHÜTTE PUMPEN LOCAL AND WORLDWIDE



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