



PRODUCT PROGRAMME

Pumps in metals, plastics and ceramics.

■ THE RIGHT SOLUTION. FOR ANY FLUID.

THE RIGHT SOLUTION. **FOR ANY FLUID.**

Anyone looking for efficient, lasting and economical solutions to their demanding industrial conveyance applications needs more than just a coherent technical concept. Experience of the application, knowledge of materials and dialogue with you, the customer, are what ultimately leads to the optimal solution. This is the course which Rheinhütte Pumpen have followed for more than 150 years.

We will find the optimal solution for your particular conveyance process.

CUSTOMISED SOLUTIONS FOR YOUR APPLICATION

Rheinhütte Pumpen offers a broad selection of pumps in the most varied designs. With the extensive range of materials in metals, plastics, ceramics and designs which are adapted for particular media, our pumps are used for almost every challenging application.

The most important areas are:

- the chemical industry
- the petrochemical industry
- the oil and gas industry / refineries
- the mining and metallurgical industries
- the iron and steel industry
- renewable energies
- environmental management and recycling
- the consumer goods industry

We will develop individual pump designs for you. Always matched with your specific application and therefore providing you with flexible and economic solutions for your special conveyance requirement.

We use customised designs for the following processes and applications:

- in all stages of sulphuric acid production from molten sulphur to product acid and on to oleum and dilute sulphuric acid
- in the manufacture of important chemical industry pre-products, for example phosphoric acid, nitric acid, sodium hydroxide and acetic acid
- in all chlor-alkali electrolysis processes
- in flue gas scrubbing
- in steel and stainless steel pickling processes
- in surface treatments such as painting processes and electro-plating
- in the conveyance of molten salts up to temperatures of 600 °C
- in the conveyance of pitch and tar
- in fertiliser production for the conveyance of urea melt, phosphate ore digestion, nitric acid and ammonium nitrate.



PERFECTION THROUGH **COMBINATION**

The safe conveyance of your media requires optimal coordination and combination of pump design, sealing system and pump material. We can supply all components needed to solve your particular conveyance requirements.



THE RIGHT DESIGN FOR EVERY TASK

Customer and market requirements are right from the initial developments of pump designs the focus of attention of Rheinhütte Pumpen. Our experience in pump selection makes us your specialist for the design of your application. We will select the right pump from our extensive range to match your conveyance need. More than 20 different types are available for a customised solution to your specific use.

These designs can be attributed to the following pump ranges:

- Centrifugal pumps – horizontal and vertical
- Axial flow pumps
- Vortex pumps
- Standardised chemical pumps (ISO 2858, ISO 5199)
- Pumps for applications according to ISO 13709 (API 610)
- Self-priming pumps
- Liquid ring vacuum pumps

PERFECTLY MATCHED SEALING SYSTEMS

If the plant is to work safely and economically the pump design and sealing system must be perfectly matched with each other. A wide variety of seal variants is available when designing pumps – for the optimal and safe solution.

The following sealing systems can be used depending on the conveyance conditions:

01 Stuffing box packing

In standard, heatable, refrigerable or gas-tight

02 Hydrodynamic shaft seals

Using an impeller with back blades or one or more auxiliary impellers and a variety of stationary systems

03 Mechanical seal

Single-acting, double-acting and stationary versions

04 Magnetic coupling

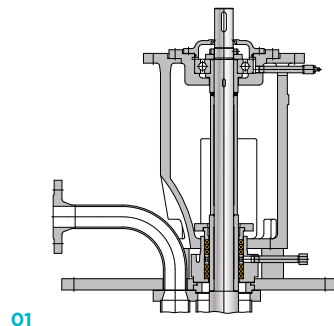
Sealed by a spacer can in a range of materials

05 Lip ring seal

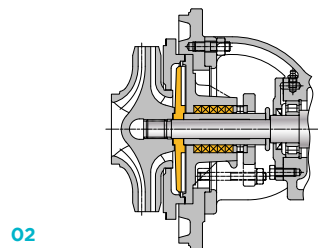
Sealed by dry-running or shaft seal rings

06 Labyrinth seal

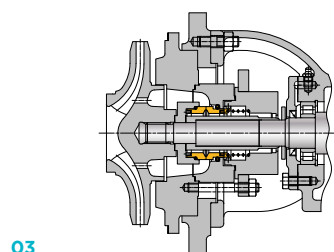
Contact-free seal for non-pressurised container systems



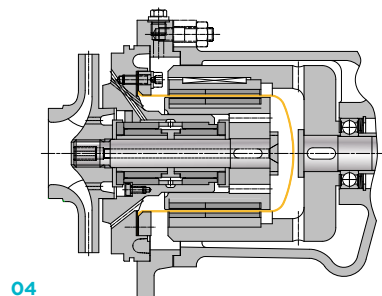
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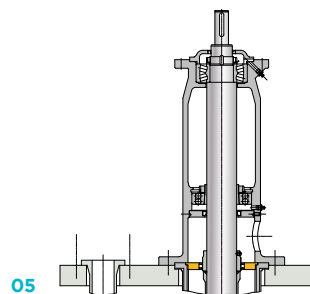
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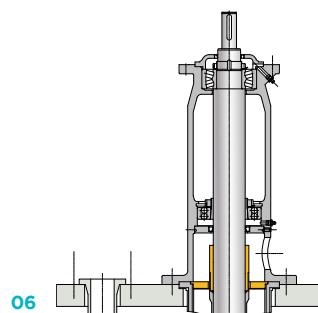
03



04



05



06

SPECIAL MATERIALS FOR SPECIAL REQUIREMENTS

As experts in corrosion and wear resistant materials we offer process and media-specific solutions. We will select the right material for your conveyance requirement and will ensure minimum wear during long operational life – even when handling difficult media.

Our extensive pump programme is based on three groups of material: metals, plastics and ceramics. Materials which we at Rheinhütte have developed ourselves also extend our materials portfolio.

■ METALS

Our range includes over 20 different metals. They differ from each other in terms of their alloying elements, their structure and their manufacturing process. As every alloy has its own characteristic properties, a suitable material can be used for each conveyance task:

- Heat resisting ferritic cast steel and wear resistant chrome-alloyed cast iron
- Highly corrosion-resistant chrome-alloyed iron-silicon alloys with good wear resistance and excellent chemical resistance
- Semi and fully austenitic high alloy steel castings with good corrosion resistance: Siguss
- High alloy Rheinhütte special materials with medium-specific or process-specific properties
- Pure metals such as titanium, Ti-Pd and nickel for the most demanding applications in certain critical media

Rheinhütte Pumpen made from high-quality stainless steels and numerous pure metals.



PLASTICS

Plastics provide a good supplement to many areas of application. Our pumps are available in six different materials, each tailored to your specific application:

- Polyolefins and fluoropolymers used in solid designs or as plastic lined materials: PP, PE 1000, PVDF, ETFE, PFA, PTFE

All manufactured in-house. Plastics from Rheinhütte Pumpen – more than just plastic.

CERAMICS

Ceramic materials achieve universal corrosion and abrasion resistance during long operational lives. For such applications Rheinhütte Pumpen offers you with Frikorund®, a FRIATEC ceramic development optimised and proven for pump construction.

- Ceramics from FRIATEC AG: FRIKORUND®, FRIALIT®, DEGUSSIT®

The specialist for ceramic materials and construction.

You will find a detailed list of all materials, their properties and applications in our brochure **Material Programme.**



PERFORMANCE DATA AND DESIGN FEATURES

METAL PUMPS

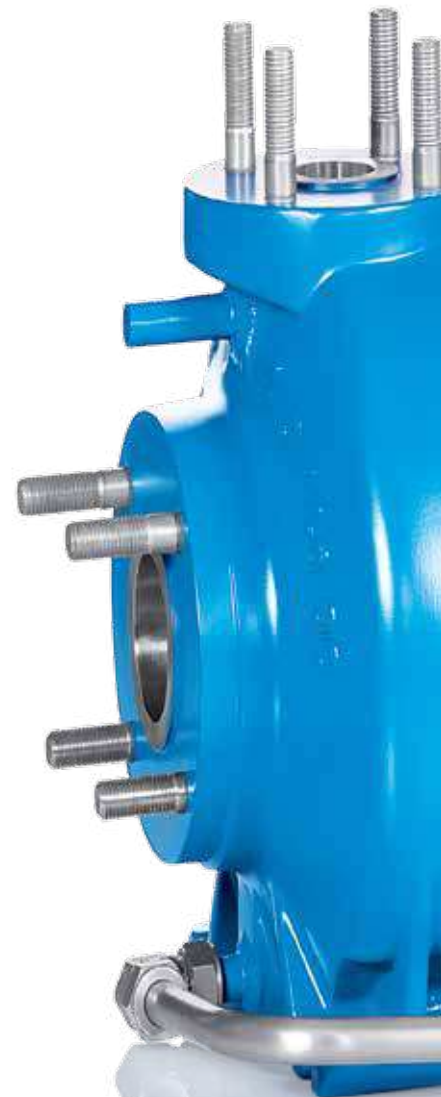


MODEL RANGE	RN	RMKN	RCE	RPROP
Size DN	25 / 400	25 / 150	32 / 300	200 / 700
Q _{max} (m ³ /h)	3.500	400	2.500	7.000
H _{max} (m)	150	150	180	6
Submersion depth _{max} (m)	–	–	–	–
T _{max} (°C)	+300	+250	+450	+150
Chemical standard	•	•	–	–
Close coupled or flange motor design	–	RMKNF	–	RPROPF
Closed impeller	•	•	•	–
Open impeller	•	–	•	–
Propeller or helical impeller	–	–	–	•
Heatable	•	•	•	–
Back pull out design	•	•	–	–
Stuffing box or shaft seal	–	–	•	•
Mechanical seal	•	–	•	•
Hydrodynamic seal	•	–	•	–
Magnetic coupling	–	•	–	–
Footstep bearing	–	–	–	–

Our metallic materials – as varied as their areas of application



RSU	GVRN	GVSO	RCEV
250 / 500	100 / 450	40 / 450	32 / 250
2.000	2.800	2.800	600
5	55	120	80
–	3,4	17	2
+150	+250	+600	+200
–	–	–	–
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PERFORMANCE DATA AND DESIGN FEATURES

PLASTIC PUMPS



MODEL RANGE	CPDR / RCNku		FNP	RNP	
Size DN	32 / 80	80 / 400	25 / 300	125 / 300	
Q _{max} (m ³ /h)	200	2.500	200	1.600	
H _{max} (m)	100	100	100	100	
Immersion depth _{max} (m)	–	–	–	–	
T _{max} (°C)	+190	+190	+190	+150	
Chemical standard	•	•	•	•	
Close coupled or flange motor design	CPDRB	–	•	–	
Closed impeller	–	•	•	•	
Open impeller	•	–	•	–	
Vortex impeller	CPRF	RCFKu	–	–	
Self-priming	–	–	–	–	
Back pull out design	•	•	•	•	
Mechanical seal	•	•	•	•	
Magnetic coupling	–	–	–	–	
Plastic lining	–	–	•	•	
Armoured casing	•	•	•	•	
Footstep bearing	–	–	–	–	

Wide choice
of plastics –
6 different plastics,
all manufactured
in-house



FNPM / FNPMF	RSKu	RCKu	RKuV	RVKu
25 / 100	25 / 65	25	25 / 80	32 / 250
350	55	20	120	1.000
100	40	50	60	70
–	–	–	1,8	3
+190	+160	+130	+100	+90
•	–	–	–	–
FNPMF	–	RCKuF	•	•
•	–	–	–	•
–	•	•	•	–
–	–	–	RKuVF	RKuVF
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PERFORMANCE DATA AND DESIGN FEATURES

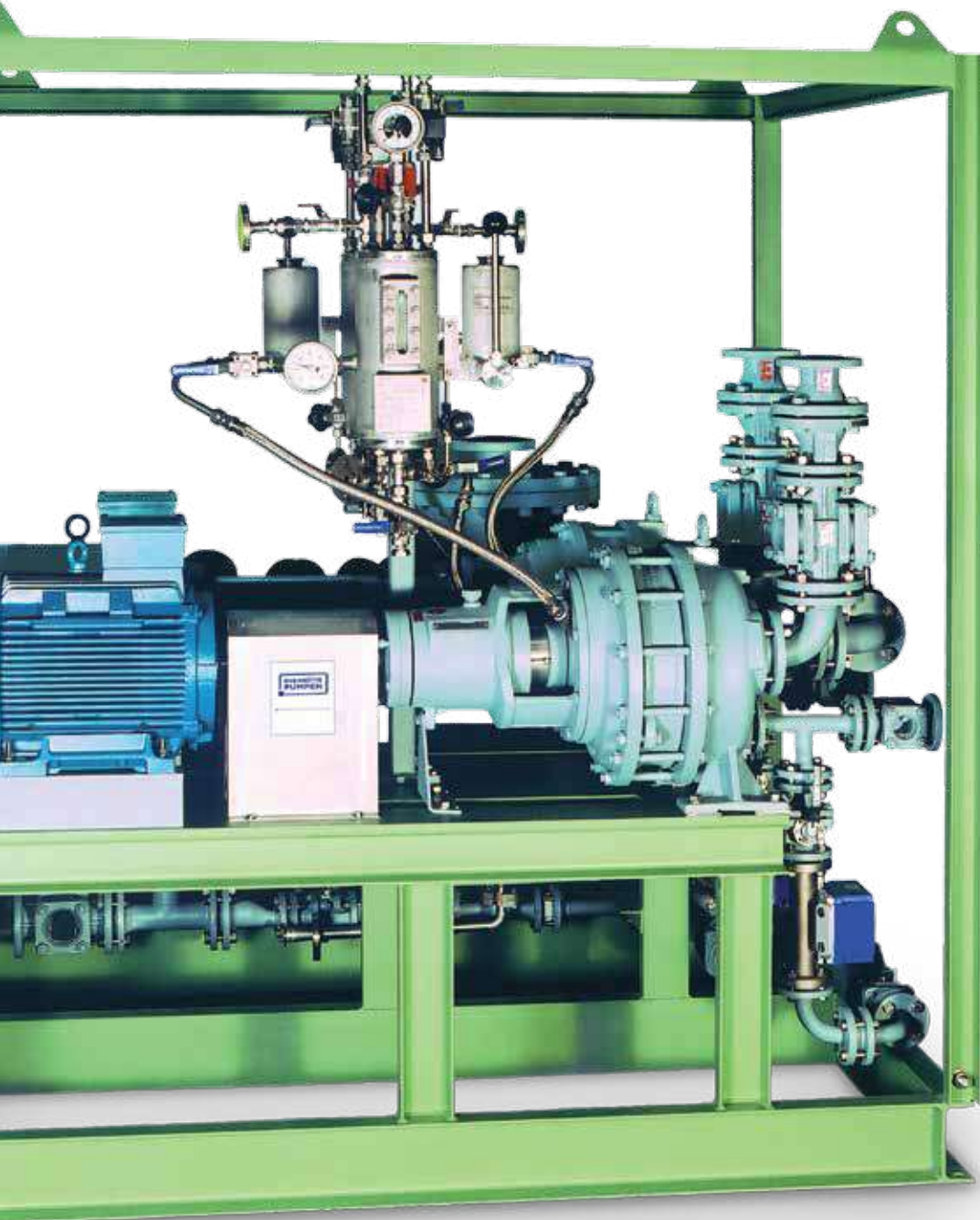
CERAMIC PUMPS



MODEL RANGE	FNC	FGP
Size DN	32 / 150	32 / 100
Q _{max} (m ³ /h)	600	700
H _{max} (m)	90	–
T _{max} (°C)	+120	+100
Chemical standard	•	–
Closed impeller	•	–
Open impeller	–	•
Back pull out design	•	–
Liquid ring pump	–	•
Stuffing box or shaft seal	•	–
Mechanical seal	•	•
Armoured casing	•	•



A wide choice
and flexibility in
our materials is
our strength – let us
advise you about
your process



OUR SERVICES AT A GLANCE



We offer the right solution for your project.

PUMP DESIGN

The success of an installation starts with **selecting the right pump**. The type, size and seal must satisfy the **requirements presented by the pumped medium**. Thanks to modern, computer-optimised hydraulics, Rheinhütte pumps are ideally **suited to meet any applications**.

MATERIAL ADVICE

Which materials are best suited to your particular application? Whether you require pump materials, seal materials or changes in process affecting the pumps – our **material specialists** will offer you an **individual recommendation**, with **full commitment**.

OPERATING CONCEPT

Whether you want to monitor centrifugal pumps or operate complex vacuum installations, we will **work with you** to devise the **right operating concept which meets your needs** – from manual to fully automatic.

DOCUMENTATION

You need specific documentation? Whether standard or project - according to your requirements we create your **individual project documentation**.

INDIVIDUAL APPROVAL

All Rheinhütte centrifugal and vacuum pumps as well as Rheinhütte vacuum compact installations are **tested at our factory** before they are delivered: Together with our customers, **specific details, processes and basic principles are tested** and discussed.

ON-SITE SUPPORT

Whether it is for initial start-up or for training your personnel – our engineers are also available to **assist you on site**.

SUCCESS IS BORN OF EXPERIENCE

150 YEARS OF RHEINHÜTTE PUMPEN

As pump manufacturers to the world, Rheinhütte Pumpen is your expert for demanding pump applications – and has been for over 150 years. Our experience for designing pumps for conveying abrasive, corrosive and toxic media, our product innovations and the supreme product quality have made Rheinhütte Pumpen a proven component of many major plants – all over the world.

YOUR INDIVIDUAL REQUIREMENTS ARE OUR BENCHMARK

Our customers benefit from our customized advisory services on materials, sealing systems and maintenance concepts. Experienced project teams will draw up individualized documentation in line with your requirements. Our customers' specifications are what counts for us and are integrated in our Quality Management systems, testing processes and the official approval procedure for pumps and installations.

RHEINHÜTTE PUMPEN – YOUR RELIABLE PARTNER

Rheinhütte Pumpen is based in Wiesbaden, Germany. With our manufacturing sites in Wiesbaden and Rennerod and many technical regional offices we can be found everywhere in Germany. And with our manufacturing sites in Brazil, China and the USA plus many international sales and service offices we are your reliable partner everywhere in the world.

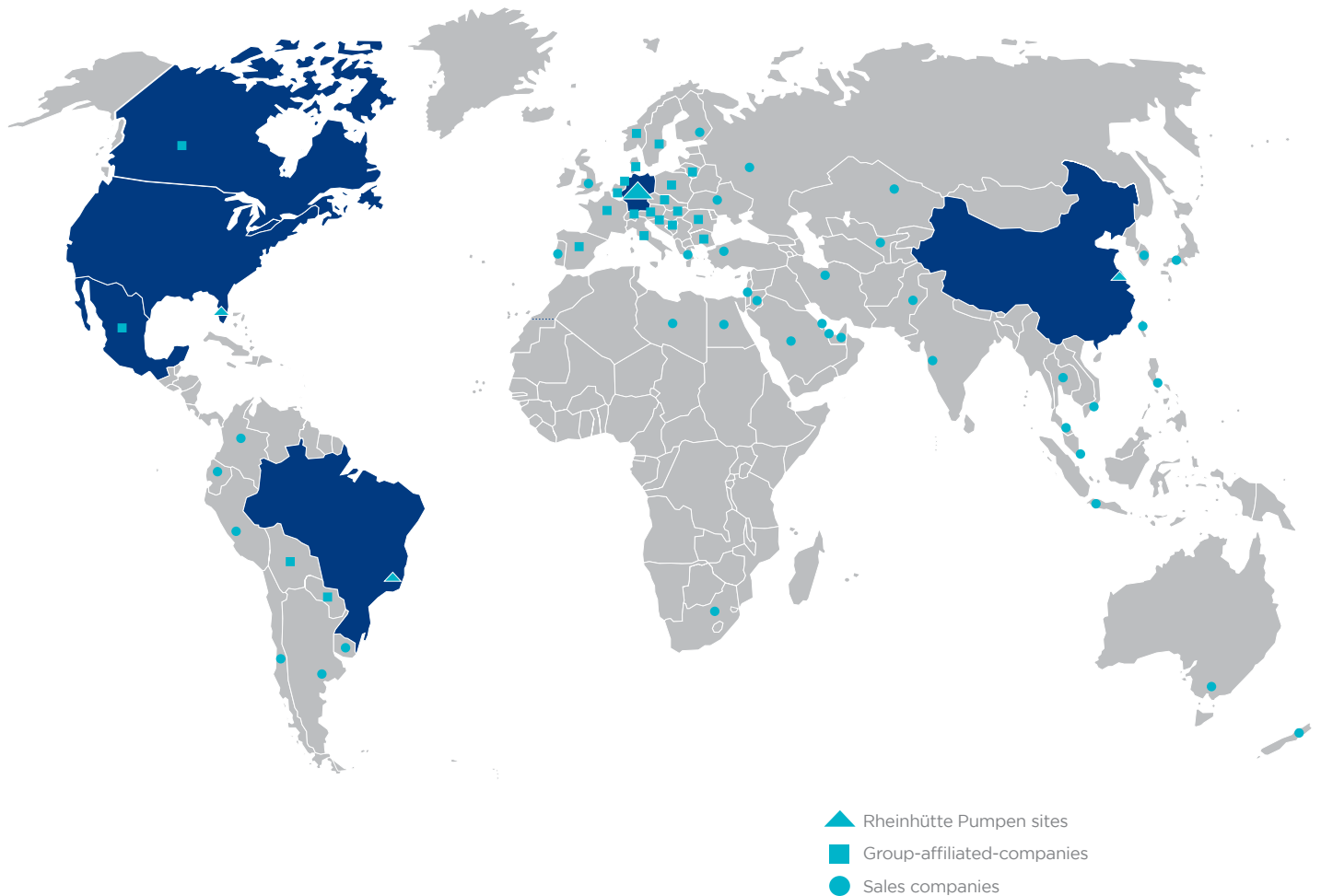
We specialise in products made from corrosion and wear resistant materials. As a part of the Aliaxis Utilities & Industries Group we have a solid foundation and benefit from the synergies of the world's largest manufacturer of plastic piping systems for the construction, manufacturing and distribution industries.

A photograph of a modern, multi-story building with large windows. In the foreground, a tall flagpole holds a white flag with the Aliaxis & Industry logo. To the left, a sign on a post reads 'RHEINHÜTTE PUMPEN' and 'THE RIGHT SOLUTION FOR ANY FLUID'. The sky is clear and blue.

**RHEINHÜTTE
PUMPEN** –
your specialist for
sophisticated pump-
ing applications.

RHEINHÜTTE PUMPEN

GLOBAL EXPERTISE



Aliaxis
UTILITIES & INDUSTRY

FRIATEC Aktiengesellschaft
Division Rheinhütte Pumpen
Rheingaustraße 96-98 - 65203 Wiesbaden - Germany
Tel +49 (0)611 604-0 - Fax +49 (0)611 604-328
info@rheinhuette.de
www.rheinhuette.de

**RHEINHÜTTE
PUMPEN**