



STERLING
PUMPS (I) PVT. LTD.

Centrifugal Pump Selection Guide

INDUSTRIES WE SERVE

- FERTILIZER
- LIQUID SULFUR
- AMMONIUM NITRATE
- MELT OF SALT
- FLUE GAS CLEANING
- CHLOR-ALKALI ELECTROLYSIS
- SULFURIC ACID
- TITANIUM DIOXIDE
- PICKLING STEEL AND STAINLESS STEEL

**RHEINHÜTTE
PUMPEN**

ITT Brands

Rheinhütte RN Standardized Chemical Pump in Metal

The pump RN is a horizontal, single-stage, end-suction, top-discharge centrifugal pumps, standardized to EN 22858 (formerly DIN 24256) ISO 2858, NF 44-121, BS 5257 and ISO 5199. RN (RNSI) pumps are used for handling chemically aggressive and/or inflammable liquids within the wide field of chemical processing and environmental technology.

- Capacities to 2700 m³/h | 11888 GPM
- Heads to 150 m | 492 ft
- Temperature ranges from -40 °C to 300 °C | -40 °F to 572 °F
- Pressures to 16 bar | 232 PSIG

Applications:

- Chemically aggressive media in the whole area of chemical processing technology and other areas of industry.

Materials:

- 15 different pure metals (Nickel and Titan) , Nickel based materials and high alloy cast steels



Rheinhütte CPDR Standardized chemical pump in plastic

Pumps of the CPDR and CPRF type family are horizontal, single-stage, end-suction, top-discharge centrifugal pumps, standardized to EN 22858 (formerly DIN 24256; ISO 2858, NF 44-121, BS 5257 and ISO 5199). The installation length of type CPRF is simply longer about the channel width so that a free passage for the fluid is given. The pumps are used for handling chemically aggressive and/or inflammable liquids within the wide field of chemical processing and environmental technology. The CPDR with open impeller is foreseen for clean liquids and fluids with a small content of solids. The CPRF (Free Flow) is able to handle fluids with larger solids. Both types are possible in close-coupled design instead of bearing block.

- Capacities to 200 m³/h | 880 GPM
- Heads to 100 m | 328 ft
- Temperature ranges from -40 °C to 190 °C | -40 °F to 374 °F
- Pressures to 16 bar | 232 PSIG

Applications:

- | | | |
|-----------------------|-----------------------------|------------------|
| • Brine | • Flue gas scrubbers | • Sea water |
| • Chemical Wastewater | • Waste incineration plants | • Steel industry |
| • Chloralkali | • Hydrochloric acid | • Sulphuric acid |

Materials:

- | | |
|------------|--------|
| • PP | • PVDF |
| • PE 1000 | • PTFE |
| • PE 1000R | |

Rheinhütte FNC Standardized chemical pump in ceramic

Pumps of the FNC are horizontal, single-stage, end suction, top-discharge centrifugal pumps, standardized to ISO 2858 and ISO 5199. The wear resistance and universal chemical resistance offers great advantages for use in corrosive and abrasive media. FNC pumps are used for handling chemically aggressive and/or abrasive liquids within the wide field of chemical processing and environmental technology.

- Capacities to 600 m³/h | 2642 GPM
- Heads to 90 m | 295 ft
- Temperature ranges from -40 °C to 120 °C | -40 °F to 248 °F
- Pressures to 10 bar | 145 PSIG

Applications:

- Chemical Industry
- Solids-containing fluids
- Titanium dioxide

Materials:

- FRIKORUND



Rheinhütte RCE Heavy Duty Chemical Centrifugal Pump in Metal

The RCE is a horizontal single-stage, end-suction, top-discharge, centrifugal pump with heavy duty bolted-down bearing pedestal. The sturdy design with front and back vanes on the impeller is primarily intended to fulfill very specific requirements as a standard chemical pump.

As a product-related special version, the RCE is the first choice in the chemical industry, the basic industry - especially in fertilizer production - environmental technology and many other industrial sectors.

It pumps organic and inorganic as well as aggressive liquids with high solid contents and is particularly suitable for hot media up to 450 degrees. Examples of applications include ammonium nitrate, molten sulphur, phosphoric acid, tar, pitch, urea melt, caustic soda, water glass, mash and cataphoretic paints. A special option of this series is the hydrodynamic shaft seal.

- Capacities to 1200 m³/h | 5283 GPM
- Heads to 180 m | 591 ft
- Temperature ranges from -40 °C to 450 °C | -40 °F to 842 °F
- Pressures to 16 bar | 232 PSIG

Applications:

- Phosphate fertilizer
- Ammonium nitrate melt
- Pitch and Tar
- Urea melt
- Molten Sulphur
- Aggressive Slurries

Materials:

- P12 different cast irons, cast steels, Nickel based materials and high alloy cast steels



Rheinhütte FNPM Magnetic drive pump in plastic

Pumps type FNPM are horizontal, single-stage, end-suction, top-discharge centrifugal pumps with magnetic coupling, dimensioned to comply with standards EN 22858, ISO 2858, NF 44-121 and BS 5257.

The scope of application covers the wide fields of chemical processing and environmental technology where chemically aggressive fluids of various concentrations at up to 190 °C are to be handled. The constant standardization of the drive components and the unique magnetic cartridge reduce the variety of parts and enable cost-saving stocking concepts. The magnet cartridge is a pre-assembled, ready-to-use unit containing all core components of the magnetic drive pump (e.g. plain bearings, impeller and containment shells). Replacement takes only a few minutes - then the old unit can be reconditioned. The cost advantage over the usual quick-coupler unit: up to 25%.

- Capacities to 350 m³/h | 1541 GPM
- Heads to 100 m | 328 ft
- Temperature ranges from -40 °C to 190 °C | -40 °F to 374 °F
- Pressures to 16 bar | 232 PSIG

Applications:

- Hot Acids
- Acetic Acid
- Chlorinated Solvents
- Chloroform
- Steel Industry
- Acetone
- Hydrofluoric Acid
- Sodium Hypochlorite
- Nitric Acid
- Amines
- Chlorine Dioxide
- Flue gas scrubber
- Waste plants
- Incineration

Materials:

- PFA
- PTFE

Rheinhütte RCNKu Standardized chemical pump in plastic

Pumps of the RCNKu and RCFKu type family are horizontal, single-stage, end-suction, top-discharge centrifugal pumps, standardized to EN 22858, ISO 2858, NF 44-121, BS 5257 and ISO 5199. With RCFKu (Free Flow), only the overall length is increased by the amount of the spiral width to ensure a free housing passage. The pumps are used for handling chemically aggressive and/or inflammable liquids within the wide field of chemical processing and environmental technology. The RCNKu with closed impeller is foreseen for clean liquids and fluids with a small content of solids. The same applies for the RCKu with open impeller design. The RCFKu is able to handle fluids with larger solids.

- Capacities to 2500 m³/h | 11007 GPM
- Heads to 100 m | 328 ft
- Temperature ranges from -40 °C to 190 °C | -40 °F to 374 °F
- Pressures to 16 bar | 232 PSIG

Applications:

- Brine
- Chemical Wastewater
- Chloralkali
- Flue gas scrubbers
- Waste incineration plants
- Hydrochloric acid
- Sea water
- Steel industry
- Sulphuric acid

Materials:

- PP
- PE 1000
- PE 1000R
- PVDF
- PTFE



Rheinhütte FNP

Standardized chemical pump with PFA-Lining

The standard chemical pump FNP is universally applicable in the chemical and pharmaceutical industry, in petrochemistry and general process engineering for pumping chemically aggressive and corrosive media.

- Capacities to 70 m³/h | 308 GPM
- Heads to 95 m | 312 ft
- Temperature ranges from -30 °C | -22 °F to 374 °F
- Pressures to 16 bar | 232 PSIG

Applications:

- Hot Acids
- Acetic Acid
- Chlorinated Solvents
- Chloroform
- Acetone
- Hydrofluoric Acid
- Sodium Hypochlorite
- Nitric Acid
- Amines
- Chlorine Dioxide
- Flue gas scrubber
- Steel Industry
- Waste plants
- Incineration

Materials:

- PFA



Rheinhütte FGP

Liquid ring vacuum pump in ceramic

Our FGP liquid ring pump is the suitable partner for difficult evacuation and compression processes involving gases and vapours in all corrosion-critical areas of application in the chemical industry. Together with the freely selectable operating medium of the liquid

ring, the FGP allows volume flows of up to 700 m³/h.

In compressor mode gas pressures of up to p₂ max = 2.5 barg are easily created. In vacuum mode for aggressive media the pump produces suction pressures of p₁ = 100 mbara up to p₁ = 25 mbara with an additional gas ejector. And this all takes place at gas temperatures of up to 100 °C. The highly corrosion-resistant technical ceramic is perfectly suitable for all media containing chlorine and hydrogen chloride.

- Capacities to 700 m³/h | 3082 GPM
- Temperature ranges from -20 °C to 100 °C | -4 °F to 212 °F

Applications:

- Caustic gases
- Chemical industry
- Chlorine gas

Materials:

- FRIKORUND

Rheinhütte RMKN

Magnetic drive pump in metal

The RMKN is a horizontal, single-stage, end suction, top-discharge centrifugal pump with magnetic coupling, dimensioned to comply with standards ISO 2858. The pumps are designed to meet the technical requirements for magnetic drive pumps as determined by VDMA 24279 and DIN EN ISO 15783. The scope of application covers the wide fields of chemical processing and environmental technology where chemically aggressive fluids of various concentrations at up to 250 °C are to be handled. For applications where the medium is kept at a constant temperature the RMKN is available in a heated version. By using heating chamber systems, the RMKN is also very suitable for difficult cases, such as conveying molten sulfur, pitch and tar.

- Capacities to 500 m³/h | 2201 GPM
- Heads to 150 m | 492 ft
- Temperature ranges from -40 °C to 250 °C | -40 °F to 482 °F
- Pressures to 16 bar | 232 PSIG

Applications:

- Aggressive, especially toxic, highly flammable, explosive or foul smelling media. In general all liquids that must not get into the atmosphere during the pumping process.

Materials:

- 12 different pure metals (Nickel and Titan), Nickel based materials and high alloy cast steels



Rheinhütte GVSO

Vertical chemical centrifugal pump in metal

28 basic sizes in a single-stage or multi-stage design allow maximum flexibility even during the planning stage. This means that the GVSO covers volume flows of up to 4.000 m³/h and pumping heights of up to 150 m. Individual immersion depth adjustment from 0,5 to 17,5 m through the use of one or more intermediate bearings completes the maximum level of flexibility. At the customer's request, the connecting dimensions and the shape of the sole plate can be individually adapted to the container and pressure flange. If constant temperatures and viscosities are required, e.g. in the case of molten sulfur, the GVSO is also available as a heated version. Here we offer a customized heating jacket system for steam and other heat transfer media. Only two additional connections for feed and discharge are required here.

- Capacities to 4000 m³/h | 17612 GPM
- Heads to 150 m | 492 ft
- Temperatures to from -40 °C to 600 °C | -40 °F to 1112 °F
- Pressures to 40 bar | 580 PSIG

Applications:

- Aggressive, also contaminated fluids, liquefied gases and melts like e.g. sulphuric acid at all concentrations, oleum, molten sulfur, Phthalic acid and molten salts

Materials:

- 1.0619 (A 216 Grade WCA / WCB)
- 1.4136S (Rheinhütte material)
- 1.4306S (A 743 CF-3 (Type 304L))
- 1.4408 (A 743 CF-8M (Type 316))
- 1.4517 (A890 Grade 1B / A743 Gr. CD4MCuN)
- 1.4529S (A 743 CN3MN (AL-6XN))
- 1.4581 (A 743 CF-8M (+Nb) / A 351 CF10MC (Type 316Cb))
- 1.7357 (A 217 Grade WC6)
- R30.20 (A 743 CN7M (Alloy 20))
- RH-SX (alloy SX)



Rheinhütte GVRN

Acid Vertical chemical centrifugal pump.

The GVRN vertical centrifugal pump has been specially designed for use in modern sulphuric acid plants covers most demanding applications in this area. The high-alloyed material is particularly suitable for hot and highly concentrated acids. The thick-walled cast material ensures long pump service life. The compact design allows easy adaptation to existing system dimensions. Special designs: wet design as well dry installation design.

- Capacities to 4000 m³/h | 17612 GPM
- Heads to 85 m | 279 ft
- Temperature ranges from -40 °C to 250 °C | -40 °F to 482 °F
- Pressures to 10 bar | 145 PSIG

Applications:

- HRS (Heat recovery system) Hot Sulfuric Acid
- Concentrated Sulphuric Acid

Materials:

- 1.4136S (Rheinhütte material)
- RH-RS (Rheinhütte material)

Rheinhütte RK

Vertical chemical centrifugal pump in metal

Vertical centrifugal pumps type RK are normally designed for open vessels/pits, to drain these objects rotational. This type of pump is not suitable for continuous operation or process operation. RK pumps are used for handling chemically aggressive media, contaminated liquids with solids up to a maximum grain size of 8 mm.

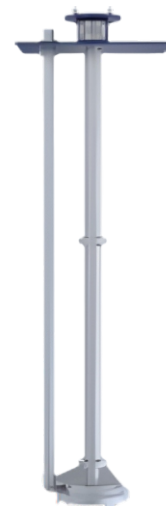
- Capacities to 56 m³/h | 247 GPM
- Heads to 55 m | 180 ft
- Temperature ranges from -40 °C to 100 °C | -40 °F to 212 °F
- Pressures to 10 bar | 145 PSIG

Applications:

- Chemically aggressive media, contaminated liquids with solids up to a maximum grain size of 8 mm.

Materials:

- 1.4408 (A 743 CF-8M (Type 316))



Rheinhütte RVKu

Chemical centrifugal pump in plastic

The vertical centrifugal pump RVKu is specially designed for pumping aggressive, slightly contaminated media such as acids, alkalis and chemical waste water. The closed impeller design with long axial throttle gaps allows immersion depths of up to 3m at operating temperatures of 80°C. Smooth running of the shaft is ensured by the use of a ball joint bearing located outside the aggressive zone as well as an immersion plain bearing made of SIC, carbon or ceramic.

- Capacities to 1000 m³/h | 4403 GPM
- Heads to 70 m | 230 ft
- Temperature ranges from -40 °C to 90 °C | -40 °F to 194 °F
- Pressures to 10 bar | 145 PSIG

Applications:

- | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• Pickling• Chemical wastewater• Sulphuric acid (H₂SO₄)• Surface treatment• Hydrochloric acid (HCl)• Fertilizer | <ul style="list-style-type: none">• Plastic Production• Functional media• Dyes and Pigments• Salts• Metal Production• Organics | <ul style="list-style-type: none">• Nitric acid (HNO₃)• Flue gas scrubber• Steel Industry• Wasteplants• Incineration |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Materials:

- PP
- PE 1000
- PVDF



**STERLING
PUMPS (I) PVT. LTD.**



OFFICE ADDRESS:

S-21, National Plaza, RC Dutt Road, Vadodara - 390 007 INDIA

☎ +91-265 3147984

✉ sterling@sterlingpumps.co.in

🌐 www.sterlingpumps.co.in