HIGH TEMPERATURE PUMPS

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PUMP FOR HIGH TEMPERATURE USE

Many industrial processes require heating or cooling to control their process characteristics. Only when predefined parameters of the processes, like temperature are obtained, the process can be started.

Maintaining a constant temperature level or changing temperature conditions can easily be done by the use of indirect heating by means of thermal fluids. To obtain the exchange between the user and the heater, thermal fluids are warmed up and circulated in closed loops.

The operating temperatures of these thermal fluids loops varies mostly from 100 °C (212 °F) up to 400 °C (752 °F). Dependent from the temperature, many different thermal fluids are available on the market.

To circulate these thermal fluids, volute casing pumps are widely used. Depending from the temperature and heat transfer media, different type of pumps are developed to circulate the fluids in the most efficient and economical way.

APPLICATIONS

- Hot Water Circulation
- Thermal Oil Circulation
- Heating
- Increasing Pressure
- Heat Transport
- Petrochemical

High Temperature Pumps

Horizontal Overhung Centerline Mounted Pumps [OH2 , API610]

API 610 (ISO 13709) Type OH2 overhung, horizontal, centerline mounted, single stage, radially split process pump. It has the broadest performance range in the industry and is used in heavy-duty refinery, petrochemical, gas processing and offshore oil production services.

MATERIALS	SPECIFICATIONS
Wetted parts: Carbon steel, 12%Cr, AUS, 316AUS, duplex, super duplex, special materials Shaft Seal: Mechanical seal	Flow to: 2600 m3/h Head to: 300 m Pressure to: 100 bar Temperature to: 450°C

Chemical Process Pumps [ASME B73.1] , Open Impeller

This versatile pump line is offered in a wide range of constructive materials that allow the pump to work with many different kinds of fluids, from corrosive and non-corrosive liquids ranging from water to hydrocarbons or slurries.
These pumps are required to meet the ANSI / ASME B73.1

MATERIALS	SPECIFICATIONS
Wetted parts: Carbon steel, stainless steel, alloy 20, hastelloy C, monel, nickel, titanium Shaft Seal: Mechanical seal, packing, dynamic	Flow to: 1260 m3/h Head to: 200 m Pressure to: Class 300 Temperature to: 260°C

Chemical Process Pumps [ISO5199 / ISO2858]

These are standardized pumps, metallic centrifugal, single stage. They comply with DIN EN 22858, ISO 2858 and ISO 5199. Handling of aggressive liquids in the chemical and petrochemical industries as well as in refinery and fire-fighting systems, handling of brine.

MATERIALS	SPECIFICATIONS
Wetted parts: Carbon steel, 304/316/316L/ duplex stainless steel, alloy 20, hastelloy C Shaft Seal: Mechanical seal, packing	Flow to: 900 m3/h Head to: 175 m Pressure to: 25 bar Temperature to: 260°C

Thermic Fluid Pumps

These hot water or thermal oil pumps are particularly suitable for use in heat transfer systems or for hot water circulation. Especially to be emphasised is the application in plants of the chemical industry, the rubber and plastic industry, the food industry and the paper industry and laundries .

MATERIALS	SPECIFICATIONS
Wetted parts: Ductile iron, carbon steel, 316 stainless steel Shaft Seal: Single mechanical seal	Flow to: 300 m3/h Head to: 175 m Pressure to: 25 bar Temperature to: 350°C

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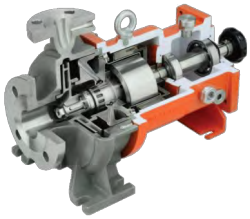
ISO 5199 Process Pumps , Open / Non-Clog / Vortex Impeller

There are used as process pumps in many different areas of process applications. The wide range of impeller selection enable to pump suspensions at solids of up to 8%, offer high efficiencies of up to 90%, with their advantages of low maintenance cost and common parts design.

MATERIALS	SPECIFICATIONS
Wetted parts: Cast iron, carbon steel, chrome iron, 304/316/duplex stainless steel Shaft Seal: Mechanical seal, packing, dynamic	Flow to: 700 m3/h Head to: 160 m Pressure to: 25 bar Temperature to: 180°C



Magnetic Drive Pumps

Stainless steel magnetic drive pumps are ideal to meet the stringent requirements of chemical processing and a multitude of other industries. These highly advanced and extremely energy efficient pumps are built to handle a huge variety of fluids reliably and absolutely safety.

MATERIALS	SPECIFICATIONS
Wetted parts: 304/304L/316/316L/duplex stainless steel, nickel-base alloys (e.g. hastelloy) Shaft Seal: Sealless	Flow to: 100 m3/h Head to: 100 m Pressure to: 16 bar Temperature to: 250°C

Vertical Inline Separate Bearing Bracket Pumps [OH3 , API610]

API 610 (ISO 13709) Type OH3 overhung, horizontal, centerline mounted, single stage, radially split process pump. Structure designs has thought-out and mature consideration on support, connection, bearing cooling and etc. Sort of available auxiliary and monitoring instruments make high safety and reliability.

MATERIALS	SPECIFICATIONS
Wetted parts: Carbon steel, 12%Cr, AUS, 316AUS, duplex, super duplex, special materials Shaft Seal: Mechanical seal	Flow to: 2600 m3/h Head to: 300 m Pressure to: 50 bar Temperature to: 450°C

Vertical Sump Pumps

These pumps are intended for use in the industrial pumping applications to pump clean or lightly contaminated liquids, fibrous slurries and liquids containing solids from the deep sumps. The pumping head is suspended into the pumped liquids and the drive motor is dry installed on the top.

MATERIALS	SPECIFICATIONS
Wetted parts: Cast iron, ductile iron, cast steel, 304/316/duplex stainless steel Shaft Seal: Packing seal, lip seal	Flow to: 300 m3/h Head to: 100 m Pressure to: 12 bar Temperature to: 120°C

High Temperature Pumps

Vertical Multi-Stage Pumps [High Temp. Version]

Multi-stage, vertical high pressure centrifugal pumps, with suction and discharge connections of the same diameter and arranged.

MATERIALS	SPECIFICATIONS
Wetted parts: 304/316 stainless steel Shaft Seal: Single mechanical seal	Flow to: 8.5 m3/h Head to: 249 m Pressure to: 25 bar Temperature to: 180°C

Medium Pressure Multi-Stage Pumps

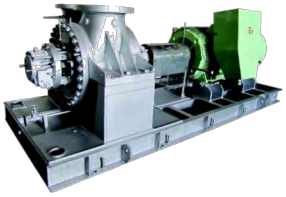
These pumps are also known as ring section pumps, radially split multistage. Designed in a modular way based on different ranges of pressures for use in a wide range of applications such as boiler feed systems, condensate transport, spray water, washing, water transport in buildings or reverse osmosis.

MATERIALS	SPECIFICATIONS
Wetted parts: Cast iron, ductile iron, cast steel, 304/316/duplex stainless steel Shaft Seal: Single mechanical seal, packing seal	Flow to: 300 m3/h Head to: 1000 m Pressure to: 105 bar Temperature to: 160°C

High Pressure Multi-Stage Pumps

These are horizontal multistage ring section pump specifically designed for high pressure services such as power stations, incineration plants and HRSG. The optimum pump design ensures total reliability and highly cost-effective solutions.

MATERIALS	SPECIFICATIONS
Wetted parts: Carbon steel, 12% Cr Shaft Seal: Single mechanical seal	Flow to: 1200 m3/h Head to: 3200 m Pressure to: 350 bar Temperature to: 220°C



Radially Split Between Bearing Pumps [BB2 , API610]

API 610 (ISO 13709) Type BB2, single or two stage, radially split pumps. They offer the widest range of hydraulic performance in the industry. Pump is designed for heavy-duty unit with simple and reliable structure, stable operation, convenient maintenance and long service life.

MATERIALS	SPECIFICATIONS
Wetted parts: Carbon steel, 12%Cr, AUS, 316AUS, duplex, super duplex, special materials Shaft Seal: Mechanical seal	Flow to: 5000 m3/h Head to: 350 m Pressure to: 110 bar Temperature to: 450°C

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- Standardized End Suction Pumps EN733/DIN24255, ISO2858/ISO5199 ASME B73.1, API610
- Split Casing Double Suction Pumps
- Solid Handling Pumps Slurry/Vortex/Semi-open/Open/Non clog
- High Pressure Multi-Stage Pumps
- Self-Priming Pumps
- Submersible Pumps
- Close Coupled Pumps
- Vertical Multi-Stage / Immersible Pumps
- Vertical Sump Pumps
- Vertical Turbine Pumps
- Mixed / Axial Flow Pumps
- Liquid Ring Vacuum Pumps
- Chemical Process Plastic Pumps
- Fire Fighting Pump Packages (NFPA20)
- Booster Pump Packages
- Trailer Mounted Pumps

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ROTAMAC can help relieve the stresses and reduce the life cycle costs associated with the most important aspects of plant operation.

Dedicated to delivering the highest quality support, ROTAMAC services and solutions integrates hydraulic, mechanical and materials engineering knowledge with creative solutions to improve equipment reliability and system performance, reduce energy consumption and improve the safety and environmental impact of operations.

Pump Services and Repair

Installation

Commissioning

Laser alignment

Inspection

Overhaul

Testing

Capabilities Overview

Design
- Equipment Selection and Optimization
- Material Selection
- System Design
- System Optimization

Start-up
- Equipment Installation
- Laser Alignment
- Commissioning and Running test
- Operator Training
- On-site Project Supervision
- On-site Troubleshooting

Operation and Maintenance
- Equipment Inspection
- Repair & Overhaul
- Advanced Diagnostics
- Service Maintenance Contracts

Product information is subject to change; consult factory for details.