ROTAMAC

Vertically Suspended Pumps
Discharge Through Column / Separate Discharge

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DISCOVER THE DIVERSITY OF ROTAMAC VERTICAL PUMPS

ROTAMAC vertical pumps span flow rates from 5 to 50,000 m3/h. They generate heads from 2 m to 330 m, are built with 1 to 25 stages, run at speeds from 250 to 3600 rpm, and operate in services from −20 to +500 °C

Individual immersion depth 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.

The advantage of ROTAMAC design is the material variants which do not come into contact with any medium. This allows a high degree of reliability. There is a choice of cast iron, carbon steel, 304 / 316 / duplex / super duplex stainless steel, 12% Cr, chrome iron 27-36% Cr, and non metallic such as natural rubber, PP, PE or PVDF.

They comply either with ISO, ANSI-HI or API standards, and guarantee reliable and efficient processes. Numerous sizes, hydraulics and material combinations are particularly well suited for use in applications where uncompromising reliability and efficiency over a wide flow range are key.

THE RIGHT CHOICE FOR ALMOST ANY USE

The ROTAMAC vertical pump is ideally suited to many areas of application

- to large capacity such as water transportation, flood control, raw water intake or cooling plant
- to low NPSHa such as how water, hot condensate drainage
- minimizing installation space and self-priming
- to chemically aggressive fluids such as acids , alkalis, industrial process or chemical effluents
- to hot liquids such as molten sulphur and molten salts
- to liquid containing solids or crystallize out such as slurry, fibers, wastewater or brine
- to fire fighting services

Vertical Turbine Pumps

Wet pit, vertically suspended, diffuser pumps with discharge through the column

CHARACTERISTICS AND DESIGN FEATURES

- Normally designed to operate in wells or sumps. Its bowl assembly consists primarily of a suction case or bell, one or more pump bowls and discharge case.
- The pump bowl assembly is positioned in the sump or well at a depth to provide the proper submergence.
- Variety of configurations, construction and material to suit applications such as cast iron, carbon steel, 304 / 316 / duplex stainless steel
- Open or enclosed line shaft construction
- Semi-open / Enclosed impellers
- Above ground or below ground discharge flanges
- Performance test of pumps based on ISO9906 and ANSI/HI14.6 grade 2B

OPERATING LIMITS

Capacity :	up to 9,000 m3/h
Head :	up to 330 m
Pressure :	up to 36 bar
Temperature :	up to 80 °C special design 150 °C

APPLICATIONS

- Irrigation or water transportation
- Municipal water systems
- Flood control
- Fire protection (NFPA-20 design)

Vertical Circulating Pumps (Mixed Flow)

Wet pit, vertically suspended, single case, mixed or semi-radial flow, single or multistage pumps

CHARACTERISTICS AND DESIGN FEATURES

- Vertical pumps consist of a bowl assembly, single-stage or multi-stage, suspended on a discharge head from soleplate at the mounting floor.
- The column length is dictated by the application and installation site.
- Variety of configurations, construction and material to suit applications such as cast iron, carbon steel, 304 / 316 / duplex stainless steel
- Open line shaft construction
- Packing seal as standard
- Above ground or below ground discharge flanges
- Performance test of pumps based on ISO9906 and ANSI/HI14.6 grade 2B

OPERATING LIMITS

Capacity :	up to 50,000 m3/h
Head :	up to 50 m
Pressure :	up to 7.5 bar
Temperature :	up to 80 °C special design 150 °C

APPLICATIONS

- Water transportation
- Cooling water service
- Seawater intake pumps
- Drainage, flood control

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Metallic Vertical Sump Pumps

Wet pit, vertically suspended, single-casing, volute, line-shaft-driven sump pumps

CHARACTERISTICS AND DESIGN FEATURES

- Intended for use in the industrial pumping applications to pump clean liquid or contaminated with solids.
- The drive motor is dry installed on the top. The pump has separate discharge pipe and support pipe column.
- Vertical line shaft with slide bearings or cantilever design
- Variety of configurations, construction and material to suit applications such as cast iron, carbon steel, 304 / 316 / duplex stainless steel
- Self-priming
- Enclosed / Semi-Open / Open / Vortex impeller
- Performance test of pumps based on ISO9906 and ANSI/HI14.6 grade 2B

OPERATING LIMITS

Capacity :	up to 2,000 m3/h
Head :	up to 150 m
Pressure :	up to 16 bar
Temperature :	up to 120 °C

APPLICATIONS

- Sump drainage
- Condensate water
- Wastewater treatment
- Dewatering service

Non-Metallic Vertical Sump Pumps

Wet pit, vertically suspended, single-casing, volute, line-shaft-driven sump pumps

CHARACTERISTICS AND DESIGN FEATURES

- Specially developed for pumping aggressive media that are contaminated with solids or that crystallize out.
- All parts in contact with the liquid are made of strong, solid plastic. The heavily constructed shaft has been given a non porous plastic coating.
- No metal parts are in direct contact with the pumped medium.
- Main materials in PP, PVDF, PE
- Semi-Open impellers
- Vertical line shaft with slide bearings or cantilever design
- Performance test of pumps based on ISO9906 and ANSI/HI14.6 grade 2B

OPERATING LIMITS

Capacity :	up to 1,100 m3/h
Head :	up to 80 m
Pressure :	up to 10 bar
Temperature :	up to 100 °C

APPLICATIONS

- Chemical effluents
- Acids, alkalis
- Brine
- Process fluids

Vertical Sump Pumps for High Temperature Services

Wet pit, vertically suspended, single-casing, volute, line-shaft-driven sump pumps [API 610, type VS4]

CHARACTERISTICS AND DESIGN FEATURES

- They are designed to comply with API 610 (ISO 13709), type VS4
- The drive motor is dry installed on the top. The pump has separate discharge pipe and support pipe column.
- Vertical line shaft with slide bearings
- Variety of configurations, construction and material to suit applications such as S-5, S-6, S-8. C-6, A-7, A-8, D-1, D-2 material
- A steam jacketed version for applications where it is critical to maintain a high temperature is available
- Many optional mechanical seal types available

OPERATING LIMITS

Capacity :	up to 1,100 m3/h
Head :	up to 150 m
Pressure :	up to 20 bar
Temperature :	up to 500 °C

APPLICATIONS

- High temperature services
- Chemicals and corrosive substances
- Hydrocarbon processing
- Chemical processing

Vertical Slurry Pumps

Wet pit, vertically suspended, cantilever sump pumps

CHARACTERISTICS AND DESIGN FEATURES

- The heavy duty cantilever design makes the pump ideally suited for heavy continuous handling of abrasive and corrosive liquids and slurries whilst submerged in sumps or pits.
- Large, open internal passages reduce internal velocities maximizing wear life resulting in lower operating costs.
- Less wear, less corrosion, wetted components are available in a wide range of alloys and elastomers, for maximum resistance to wear in virtually any industrial application, including those demanding both abrasion and corrosion resistance and where larger particles or high density slurries are encountered.
- No submerged bearing failures, No shaft sealing problems,
No priming required, Less risk of blocking.

OPERATING LIMITS

Capacity :	up to 1,100 m3/h
Head :	up to 40 m
Pressure :	up to 5 bar
Temperature :	up to 100 °C

APPLICATIONS

- Sludge / Slurry recirculation
- Wet scrubber processing
- Mining & mineral processing
- Abrasive service applications

ROTAMAC

- 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

436 Soi On-Nuch 39, Sukhumvit Rd.,
Suanluang, Bangkok 10250 - Thailand

T : +66 2721 3860
F : +66 2721 3869
E : sales@energytechnology.co.th
www.energytechnology.co.th

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.