

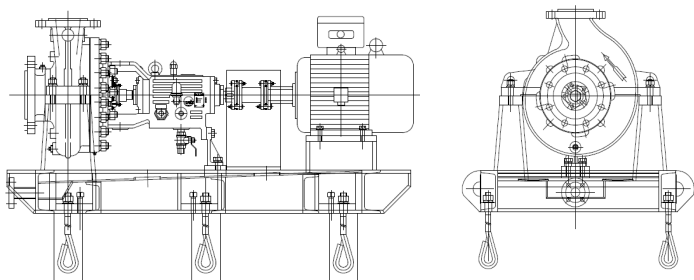
ROTAMAC

ROTAMAC RAS
Centrifugal Pumps for Oil and Gas Industries



INTRODUCTION

This data booklet deals with RAS model, centrifugal pumps for oil and gas industries



The pump type RAS (OH2) is a series of horizontal overhung centerline mounted, single stage, single suction heavy duty centrifugal pumps with volute design casings. The design of RAS complies with the American Petroleum Institute Standard Centrifugal Pumps For General Refinery Services, also known as API 610/ ISO 13709.

Satisfying this standard, the RAS meets the high-level performance requested by refineries and petrochemical industries.

DESIGN FEATURES

- Single stage overhung design pump – API610 (OH2)
- Heavy duty, centerline mounted, radially split casing
- Back-pull out unit design. Pump internals can be taken out without disconnecting suction/delivery piping or moving driver.
- Due to the centerline discharge the casing is self-venting.
- The impeller is a closed radial design, dynamically balanced and incorporates a wear ring on either side of the impeller.
- Reduces radial loads, reduces minimum flow requirements, high efficiency at any duty
- The design of the pump ensures very low vibration levels during operation

APPLICATIONS

- Fluid handling in oil refineries and petrochemical industry
- High temperature and high pressure critical applications in chemical and allied industry
- Fertilizer, carbamates/lean and semi lean solutions, NH₃ feed, other removals
- Power plant, Hot water circulation, condensate transfer, fuel oil
- Onshore/Offshore installations

STANDARDISED

- Pump designed and manufactured in accordance with the Standards of API 610 / ISO 13709

ADVANTAGES

- Improved efficiency and NPSHr by verified hydraulic design of impellers.
- Low vibration levels and excellent smooth running characteristics.
- Variety of materials and shaft seal to meet any corrosive fluids and difference applications.
- Easy to maintain without any special tool.
- A single-bearing housing to absorb all forces imposed upon the pump shaft and maintain rotor position during operation
- A robust bearing bracket ensures only minor deflection on the shaft and a long working life for The bearings and the mechanical seal.
- Permit removal of the coupling spacer and back pullout assembly without disturbing the driver, coupling hubs, or casing.
- The pumps are mounted on a baseplate and are flexibly coupled to their drivers

WORKING CONDITION

- Liquid pumping temperature up to 425 °C
- Maximum permissible pressure: 50 barg
- Flow rate: up to 2,900 m³/h
- TDH: up to 300 m
- Speed: 980, 1450, 2980 rpm for 50 Hz

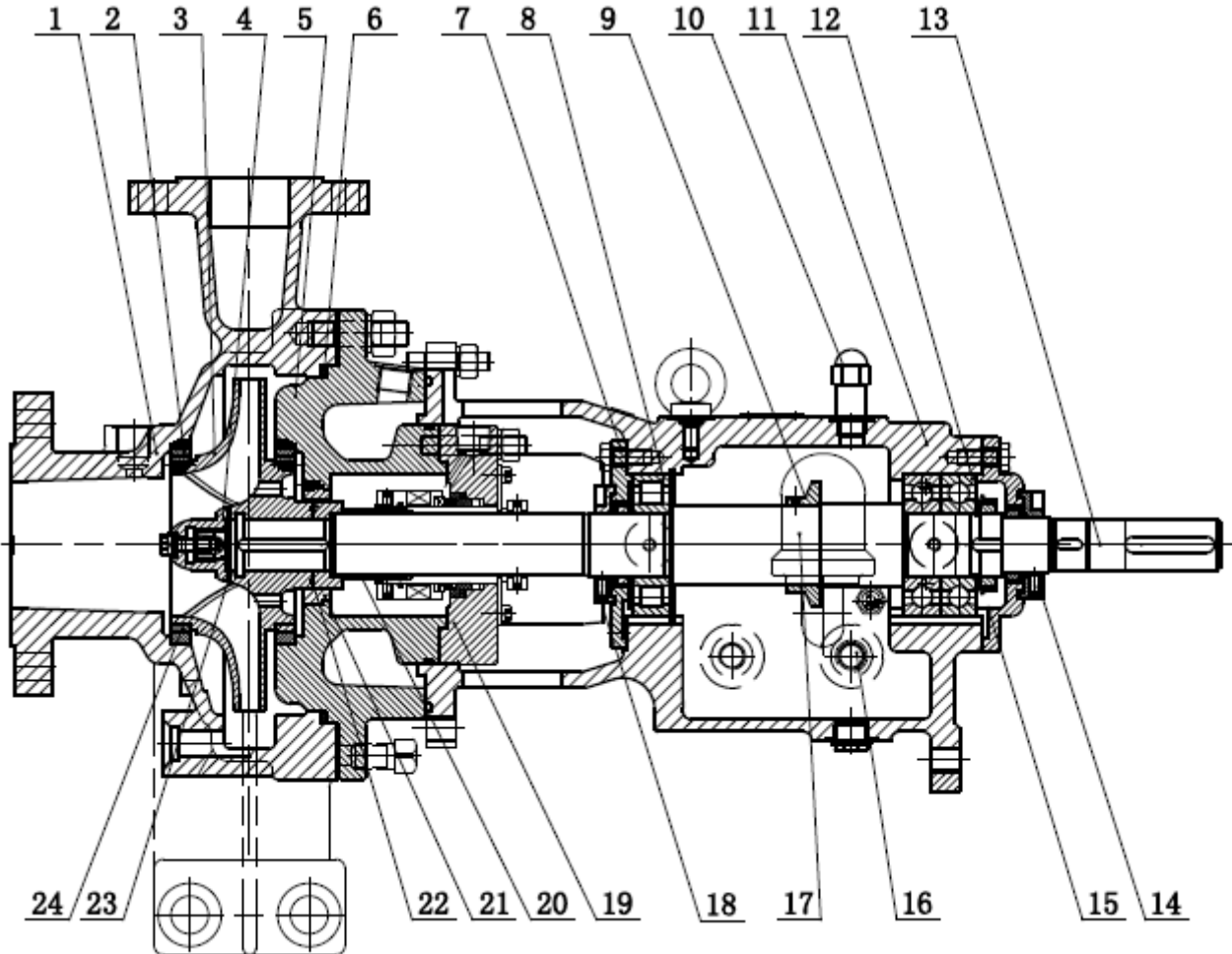
MATERIAL AND CONSTRUCTION

- Materials: S-5, S-6, S-8, S-9, C-6, A-7, A-8, D-1, D-2
- Shaft seal: single mechanical seal, double mechanical seal
- Sealing plan: according to API 682
- Nozzles: ASME B16.5 class 150/300, available drilled to EN standard
- Lubricant: Oil
- Configuration: OH-2, centerline-mounted, single-stage overhung pumps
- Optional: heating jackets for casing and sealing cover, water-cooled bearing house, vibration nipple, temperature measurement

Centrifugal Pumps for Oil and Gas Industries

PUMP SECTIONAL DRAWING AND PARTS LIST - ROTAMAC RAS , API 610 OH2

Pump construction is a little different depending on size



Item no.	Part name	Materials / Construction
1 & 5	Casing Casing Cover	Carbon Steel, 12%CR, AUS, 316 AUS, Duplex, Super Duplex
2	Casing Wearing	12%CR Hardened, Hard-Faced 316 AUS, Ni-Cu Alloy, Hard-Faced Duplex, Hard-Faced Super Duplex
3	Impeller	Carbon Steel, 12%CR, AUS, 316 AUS, Duplex, Super Duplex
8	Radial Bearing	Cylindrical Roller Bearings
12	Thrust Bearing	Double row angular contact ball bearings
13	Shaft	4140 Alloy Steel, 12%CR, AUS, 316 AUS, Ni-Cu Alloy, Duplex, Super Duplex
19	Mechanical Seal	Single Mechanical Seal, Double Mechanical Seal
24	Impeller Wearing	12%CR Hardened, Hard-Faced 316 AUS, Ni-Cu Alloy, Hard-Faced Duplex, Hard-Faced Super Duplex

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

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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



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