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RUIS series
Chemical process pumps according to ASME B73.1

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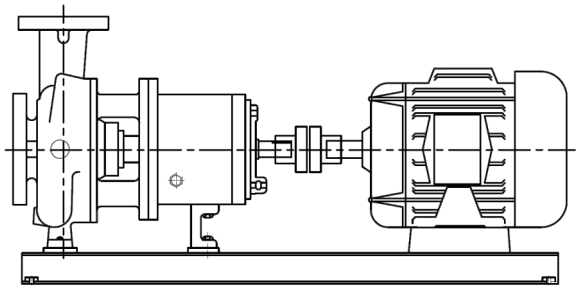
INTRODUCTION

This data booklet deals with RUIS model, horizontal end suction centrifugal pumps for chemical process.



The RUIS is metallic centrifugal pump, single stage, centerline discharge, foot mounted which meets ASME B73.1 requirements.

■ Pump casing: volute type with flanged.
■ Impeller: open impeller design for the chemical process industries services. Ideally suited for corrosives and abrasives, handles solids and stringy fibers with ease. Allows for simple restoration of clearances when wear takes place. Back pump-out vanes reduce pressure on the shaft seal, reduce axial thrust on the bearings.
■ Shaft and supports: the carbon steel or 316 stainless steel shaft is guided and supported by heavy duty bearings increase bearing life.
■ Seal: the mechanical type or packing seal type and easily replaceable.
■ Coupling to the motor: the pumps can be coupled to IP 55 standard electric motors with B3 motor mounting.
■ The back pull out constructional concept, connection to the motor with a flexible coupling, spacer coupling available on request.
The wet end to be disassembled from the rear for inspection purposes and repairs without disconnecting the motor or the pump casing from the piping.
■ Direction of rotation: clockwise viewed from drive side.

APPLICATIONS

The RUIS series standardized pumps have been designed for several applications, such as chemical process, high temperature services, high suction pressure, corrosives and abrasives, handles solids and wastewater treatment for industrial uses.

STANDARDISED

■ Pump designed and manufactured in accordance with ASME B73.1
■ Balanced impeller according to ISO1940 grade G6.3, ensures smooth operation.
■ Full compliance with ISO9908 / ISO5199 shaft run-out and ISO10816-7 vibration requirement.
■ Performance test of pumps based on ISO9906 and ANSI/HI14.6 grade 2B

ADVANTAGES

■ Improved efficiency and low NPSHr.
■ Low vibration levels and excellent smooth running characteristics.
■ Solid-handling, ideally suited for abrasives applications and available in a variety of materials for corrosives applications.
■ Variety of shaft seal solutions for difference solutions.

WORKING CONDITION

■ Liquid pumping temperature up to 260 deg C
■ Maximum permissible pressure: Class 150 / Class 300 .
■ Flow rate: 2.5 to 1260 m3/h
■ TDH: 6.5 to 200 m
■ Speed: 1450 / 2900 rpm for frequency 50 Hz, 1750 / 3500 rpm for frequency 60 Hz

MATERIAL AND CONSTRUCTION

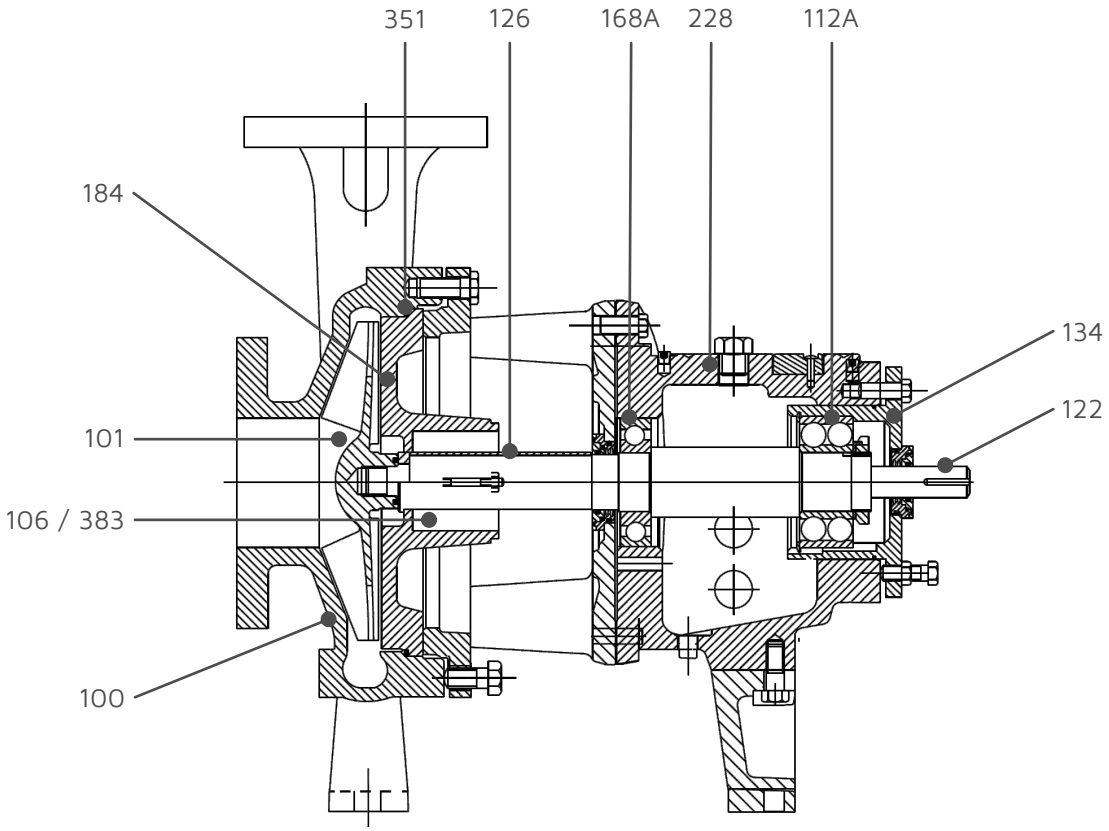
■ Pump casing & impeller: carbon steel, 304 / 316 / 316L / 904L / duplex stainless steel, alloy 20, monel, nickel, hastelloy, titanium
■ Shaft: carbon steel, 316 stainless steel or depend on pump casing material
■ Shaft seal: single mechanical seal, packing seal, double mechanical seal, dynamic seal
■ Lubrication: oil, grease

The pump is driven by a standard IEC foot mount motor or diesel engine. The power is transmitted through a standard or spacer coupling.

The baseplate is fabricated from steel, drill and tap bases, secure pump and motor to base, made more rigid and pre-alignment before delivery.

PUMP SECTIONAL DRAWING AND PARTS LIST

Pump construction is a little different depending on size



Item no.	Part name	Materials / Construction
100	Casing	carbon steel, 304 / 316 / 316L / 904L / duplex stainless steel, alloy 20, monel, nickel, hastelloy, titanium
101	Impeller	carbon steel, 304 / 316 / 316L / 904L / duplex stainless steel, alloy 20, monel, nickel, hastelloy, titanium
106	Packing	graphite, PTFE
122	Shaft	carbon steel, 316 stainless steel or depend on pump casing material
112A	Outboard bearing	double row angular contact
126	Shaft sleeve	410 / 316 stainless steel or depend on pump casing material
134	Bearing housing	cast iron
168A	Inboard bearing	single row ball
184	Seal chamber / Stuffing box cover	carbon steel, 304 / 316 / 316L / 904L / duplex stainless steel, alloy 20, monel, nickel, hastelloy, titanium
228	Bearing frame	cast iron
351	Casing gasket	fiber, PTFE
383	Mechanical seal	single mechanical seal, double mechanical seal, cartridge seal

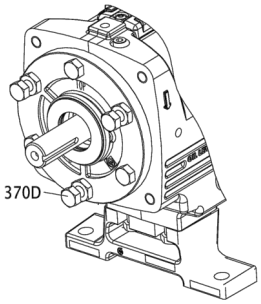
RUIS Series, Chemical Process Pumps

INTELLIGENT DESIGN

Fully open impeller

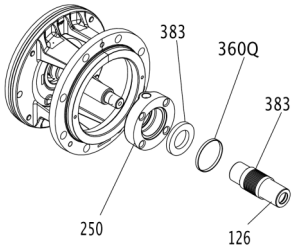
Design suitable for most services, allows for resistance to wear and corrosion. Provides for easily renewable clearance and designed for optimum efficiency.

Allows for simple restoration of impeller clearances

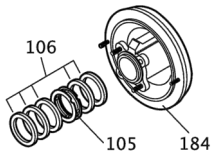


RUIS open impeller can be adjusted, simply and quickly, to compensate for wear and renew performance by using jack bolts (370D)

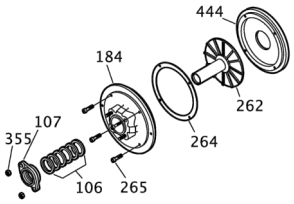
Variety of shaft seal solutions



Mechanical seal (383), Gland seal (250), Shaft sleeve (126), Gasket (360Q)



Packing seal (106), Lantern ring (105), Stuffing box cover (184)



Dynamic seal (262), Backplate (444), Gasket (264), Stuffing box cover (184), Packing seal (106), Gland (107)

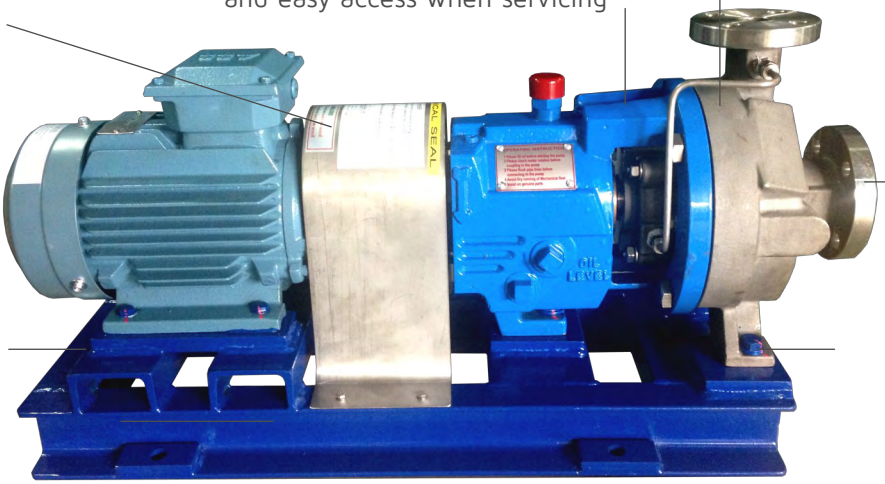
THE COMPLETE MOUNTED PUMP UNIT WITH BASEPLATE, COUPLING AND MOTOR

Hydrostatic pressure passed to ensure that there are no visible signs of leakage at application pressure

Stainless steel coupling guard

Back pull-out design facilitates fast and easy access when servicing

Flange dimensions comply with ASME B16.5, the pump are also available with flanges drilled to DIN or JIS standard



Fabricated steel baseplate made more rigid than cast iron base

Drill and tap bases, secure pump and motor to base and made more rigid

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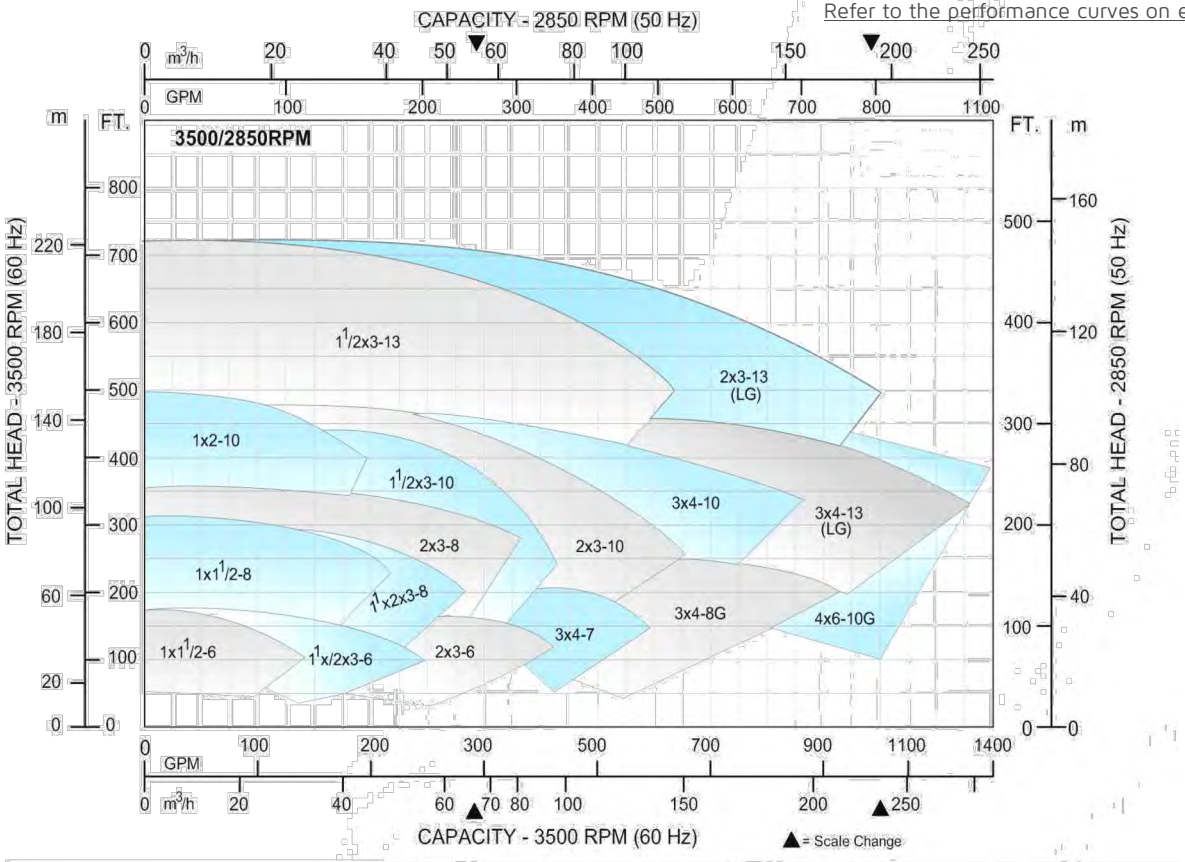
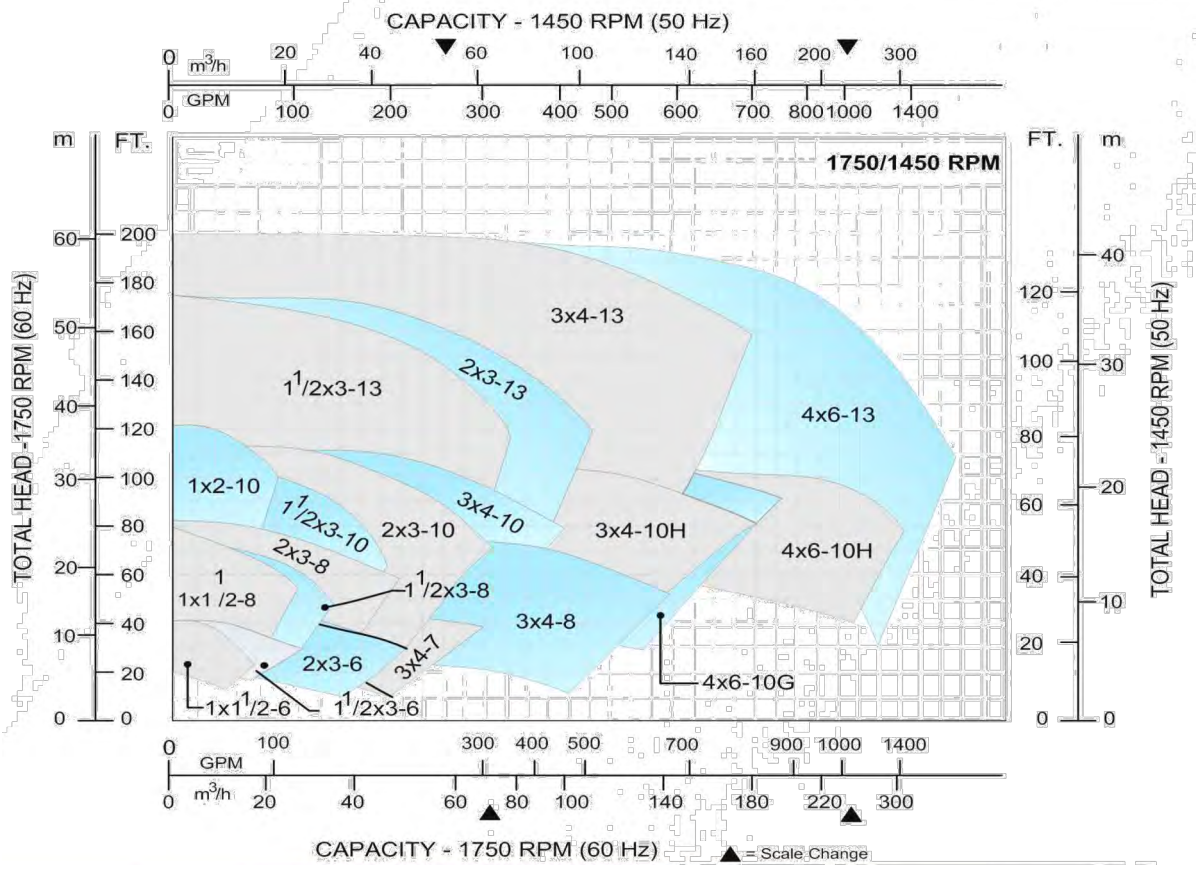
Selection Charts

Curves on this page are for guidance only.
Refer to the performance curves on each model.





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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.