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ROTAMAC ASL
Heavy Duty Wear Resistance Pumps

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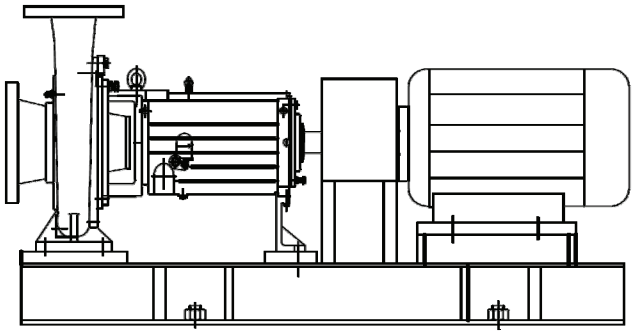
INTRODUCTION

This data booklet deals with ASL model, heavy-duty horizontal end suction wear resistance solutions for the most abrasive and corrosive slurry applications



The ROTAMAC ASL is end suction heavy-duty pump, semi-open impeller with front wear plate. The ASL is built to stand up to the toughest services, while providing maximum reliability and extreme ease of maintenance. Available in a wide variety of materials to prevent corrosion and abrasion, the ASL, with its heavy duty design, extra thick impeller and wearplate, provides you with the right pump for your heavy duty application along with years of dependable service even under the most severe conditions.

IMPELLER ADVANTAGES

Heavy construction impeller with extra wall thickness to greatly extended life time and reduce life cycle cost on heavy slurry applications.

- Ideally suited for corrosives and abrasives, handles solids and heavy slurries
- Semi-open impeller design
- Abrasive large solids containing liquids
- Heavy section thickness provides the ultimate in protection against abrasive wear in heavy slurries
- Back pump-out vanes to reduce wear on the back plate and reduce pressure on the shaft seal
- Allows for simple restoration of clearances

STANDARDISED

- Hydrostatic pressure testing 1.5 times the designed pressure for pressure containing parts
- 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, below 10kW acc. to paragraph 4.4.2

APPLICATIONS

The ASL wear resistance pumps are used for industrial abrasive and corrosive slurry application to ensure process reliability, high efficiency and low operating costs.

- Wet scrubber systems
- Waste sludge
- Paper mill wastes and liquors
- Clay slurries
- Sugar processing
- Sludge recirculation
- Dirty water to the most difficult applications

WORKING CONDITION

- Liquid pumping temperature: up to 150 °C
- Maximum permissible pressure: up to 16 barg
- Flow rate: up to 1350 m3/h
- TDH: up to 105 m

MATERIAL AND CONSTRUCTION

- Pump casing: cast iron, ductile iron, 304 / 304L / 316 / 316L / 904L / duplex stainless steel
- Impeller and wear plate: 26% Cr, 304 / 304L / 316 / 316L / 904L / duplex stainless steel
- Shaft: non-wetted shaft in carbon steel
- Shaft seal: single / double mechanical seal
- Lubrication: oil / grease
- Nozzles: flange DIN PN16
- Special materials, special designs are available

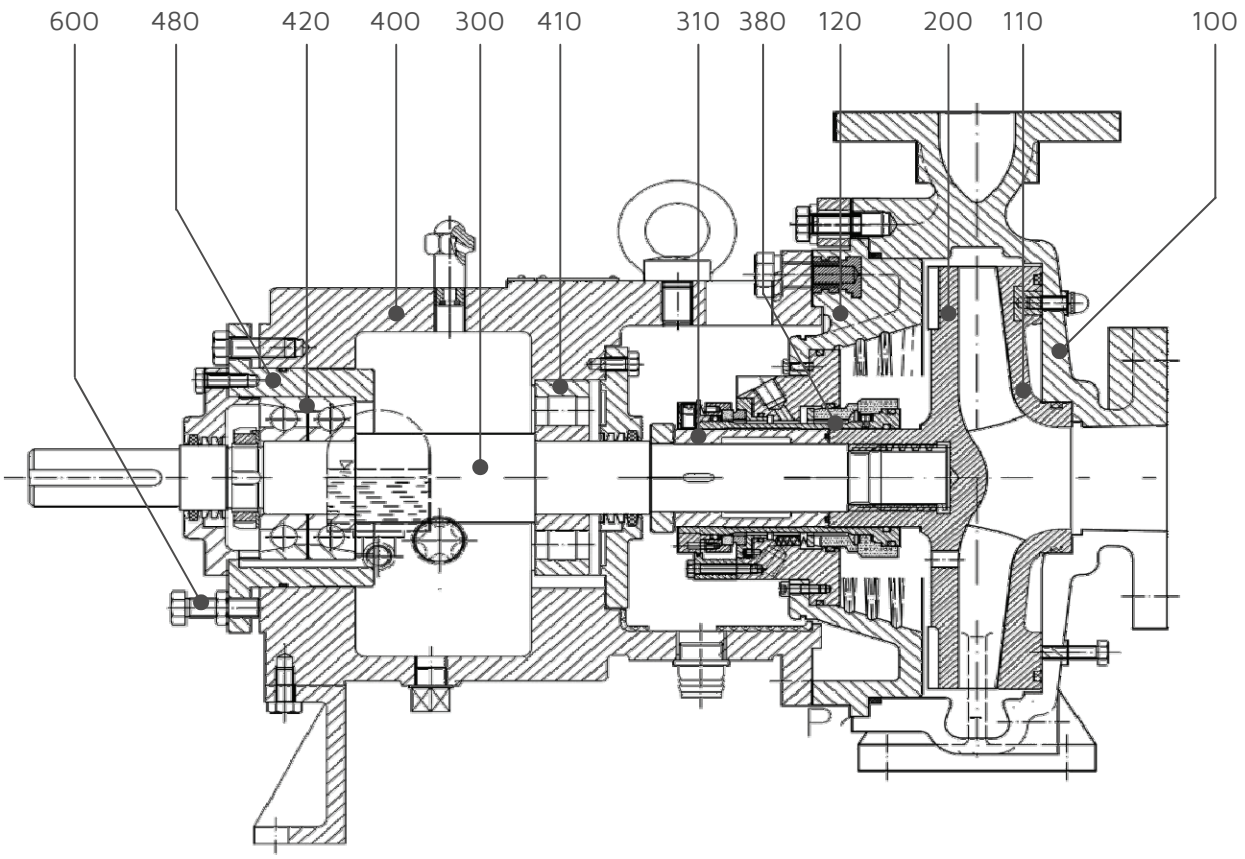
The pump is driven by a standard IEC foot mount motor or diesel engine. The power is transmitted through a standard or spacer coupling.

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

ASL Series, Heavy Duty Wear Resistance Pumps

PUMP SECTIONAL DRAWING AND PARTS LIST

Pump construction is a little different depending on size



Item no.	Part name	Materials / Construction
100	Casing	cast iron, ductile iron, 304 / 304L / 316 / 316L / 904L and duplex stainless steel
110 120	Wear Plate Back Plate	26% Cr high chromium alloy, 304 / 304L / 316 / 316L / 904L and duplex stainless steel, special materials are available
200	Impeller (semi-open)	26% Cr high chromium alloy, 304 / 304L / 316 / 316L / 904L and duplex stainless steel, special materials are available
300	Shaft (non-wetted shaft)	carbon steel, special materials are available
310	Shaft Sleeve	304 / 304L / 316 / 316L / 904L and duplex stainless steel, special materials are available
380	Shaft Sealing	single mechanical seal, double mechanical seal, cartridge seal
400 480	Bearing Housing Bearing Box	cast iron
410	Inboard Bearing	cylindrical roller bearing
420	Outboard Bearing	double row angular contact ball bearing
600	Rotating Assembly Adjusting Screw	steel

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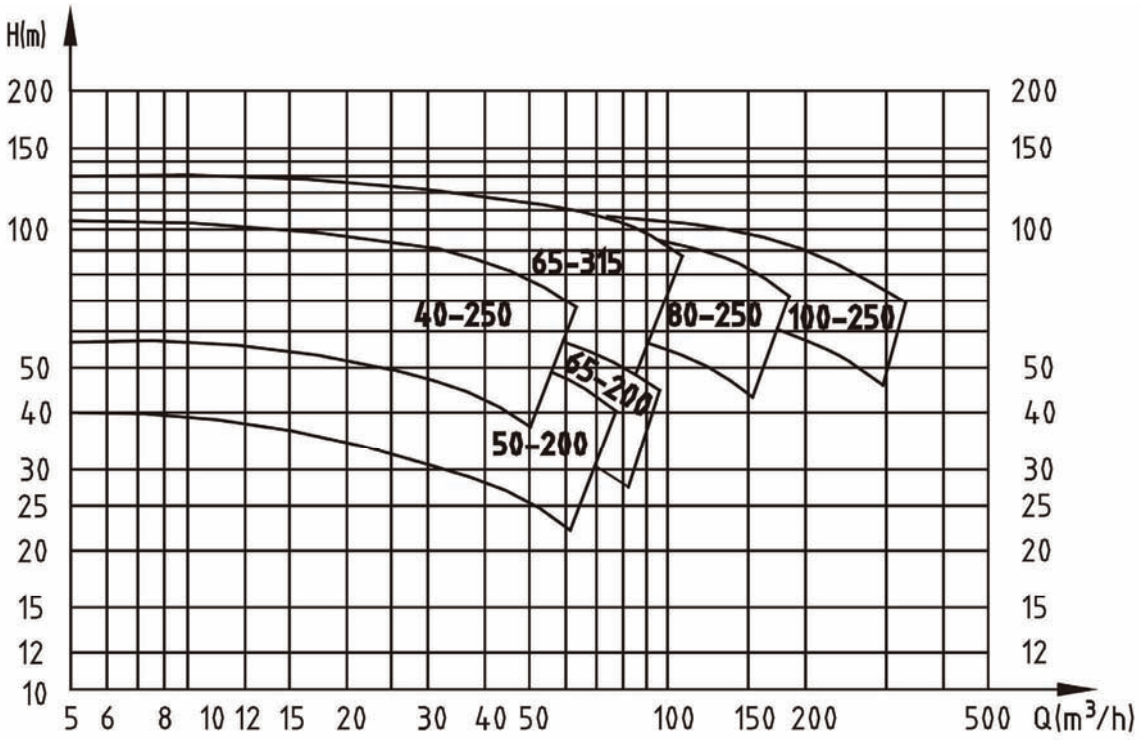
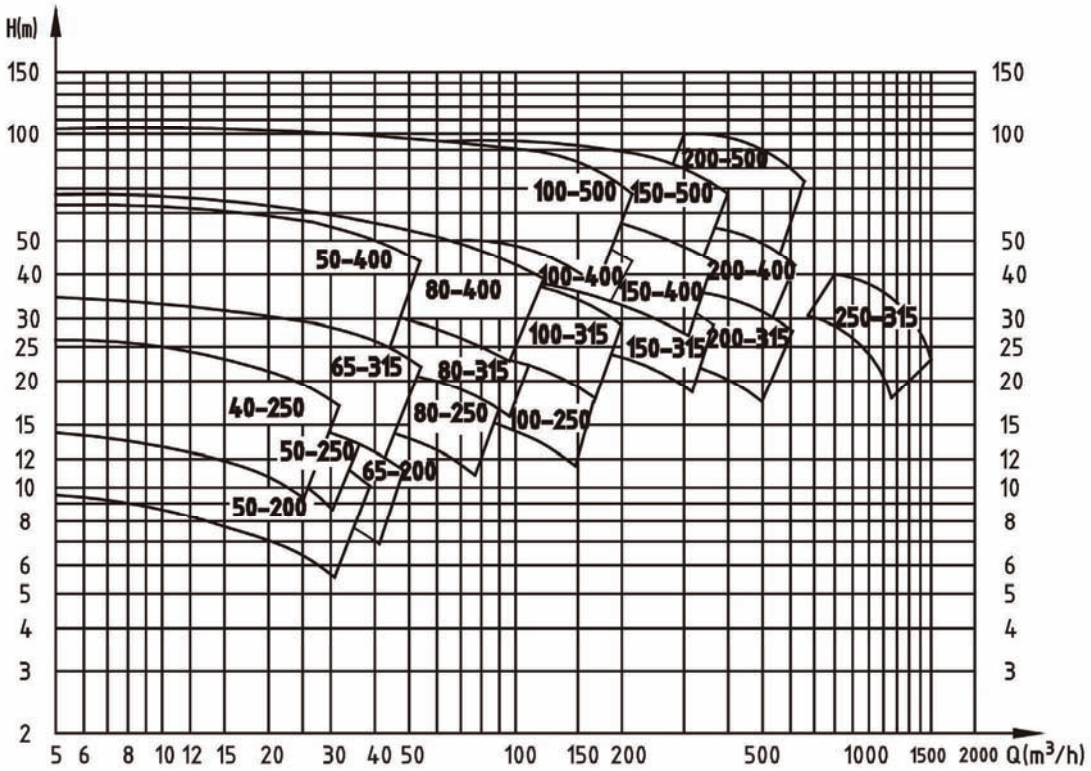
Selection Charts

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





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Selection Charts

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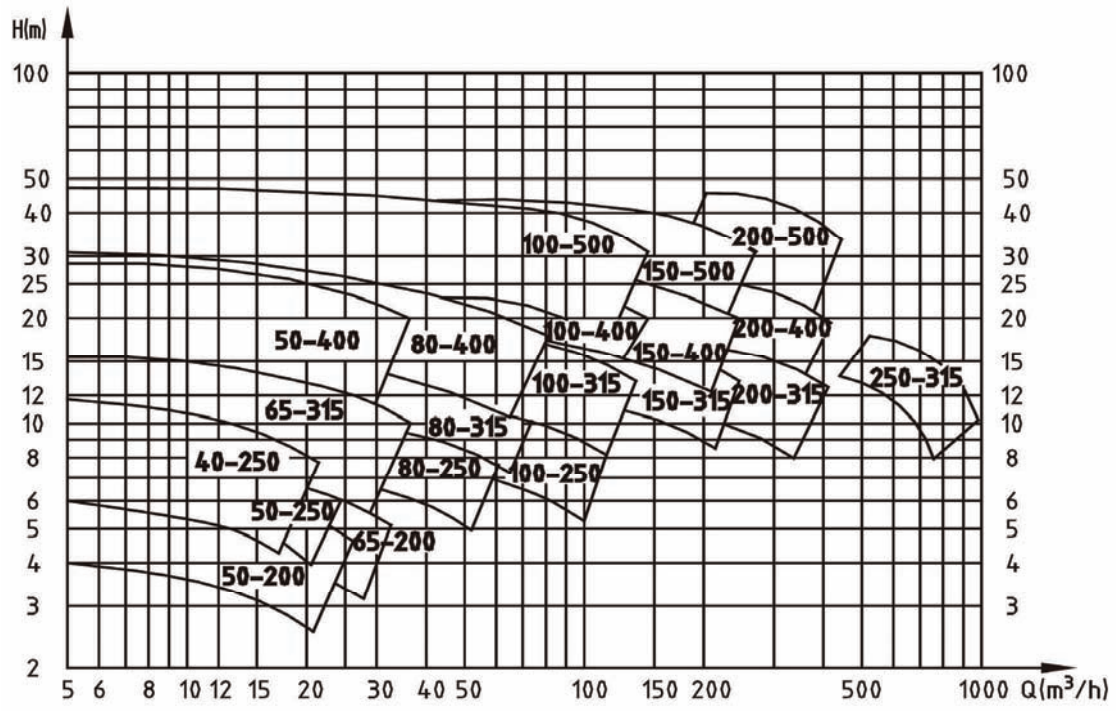

PRESSURE / TEMPERATURE RATING

- Casing design pressure: 16 barG
- Hydrostatic test pressure: 1.5 times of design pressure, holding time at least 10 minutes
- Casing design temperature: 150 deg C

FEATURES AND BENEFITS

- Robust, reliable and heavy-duty
- Extra thick wet end components extend wear life
- Solids handling, wear resistance
- Reduces life cycle costs, energy consumption, operation time and downtime
- Replaceable wear liner for low maintenance cost
- Easily replaceable wear parts
- Improved efficiency and low NPSHr.
- Low vibration levels and excellent smooth running characteristics.
- Suitable for the most demanding industrial applications

PUMP SELECTION

For pump selection the hydraulic performance curves should be used. These curves are based on water at 15 deg C, SG equal to 1.0 and viscosity equal to 1.0 cP

Rated flow shall be within the region of 30% to 110% of capacity at the best efficiency point to avoid the problems caused by vibration, cavitation, internal flow recirculation.

NPSH values are indicated on the performance curves. At least 1.0 m should be added as a safety margin. To overcome variations between actual and design system requirements, it is recommended that the driver power exceeds the absorbed pump shaft power.

Motor nameplate rating (kW)	% of rated pump power
up to 7.5	125%
11 to 18.5	120%
22 to 37	115%
45 and above	110%

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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.
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