ROTAMAC

ROTAMAC SSC Series
Progressive Cavity Pumps

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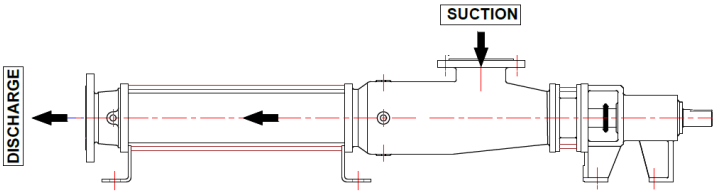
INTRODUCTION

ROTAMAC offers a range of progressing cavity pumps for demanding positive displacement process applications. Our pumps provide a near constant flow rate and suction lift capability for handling wastewater sludge, slurries, and viscous fluids.



Progressing cavity pumps belong to the group of positive displacement pumps. The main components are a rotating rotor and a stationary stator. The rotor, hinged or elastically attached on one side, is a round-threaded screw. On the output side, the axial position oscillates.

The hollow stator is elastic, has the same pitch length as the rotor. This leaves conveying spaces between the stator and the rotor, which move continuously from the inlet to the outlet side.

The size of the delivery spaces and the associated delivery rate depends on the size of the construction.

Even highly viscous and abrasive media can be pumped safely and without problems. They are also suitable as submersible pumps in wells and with open end connections for emptying barrels.

PUMP DESIGN

■ Suction / Delivery Connection :
Standard connections are Tri-Clamp type.
Other connections are available including hopper design with auger.

■ Tapered Stators :
To improved product flow, a more streamline / tapered opening is standard.

■ Pumping Elements :
Rotor and Stators designs are available for optimal pump performance and pulsation free transfer of products.

■ Shaft Sealing :
Numerous shaft seal designs are available, Including sanitary single or double mechanical seal for sterile application.

■ Coupling Rod / Auger :
Coupling rods are optionally supplied with auger.

■ Suction Housing :
Housing is designed free of dead space. Available with heating or cooling jackets.

APPLICATIONS

SSC ranges have been designed to meet the most demanding hydraulic coverage requirements and for all types of liquid, making it the ideal range for challenging pumping operations :

■ Fields of Environment and Energy
■ Food and Pharmaceutical Sectors
■ Oil and Gas Mid-/Downstream
■ Chemical, Pulp and Paper Industries

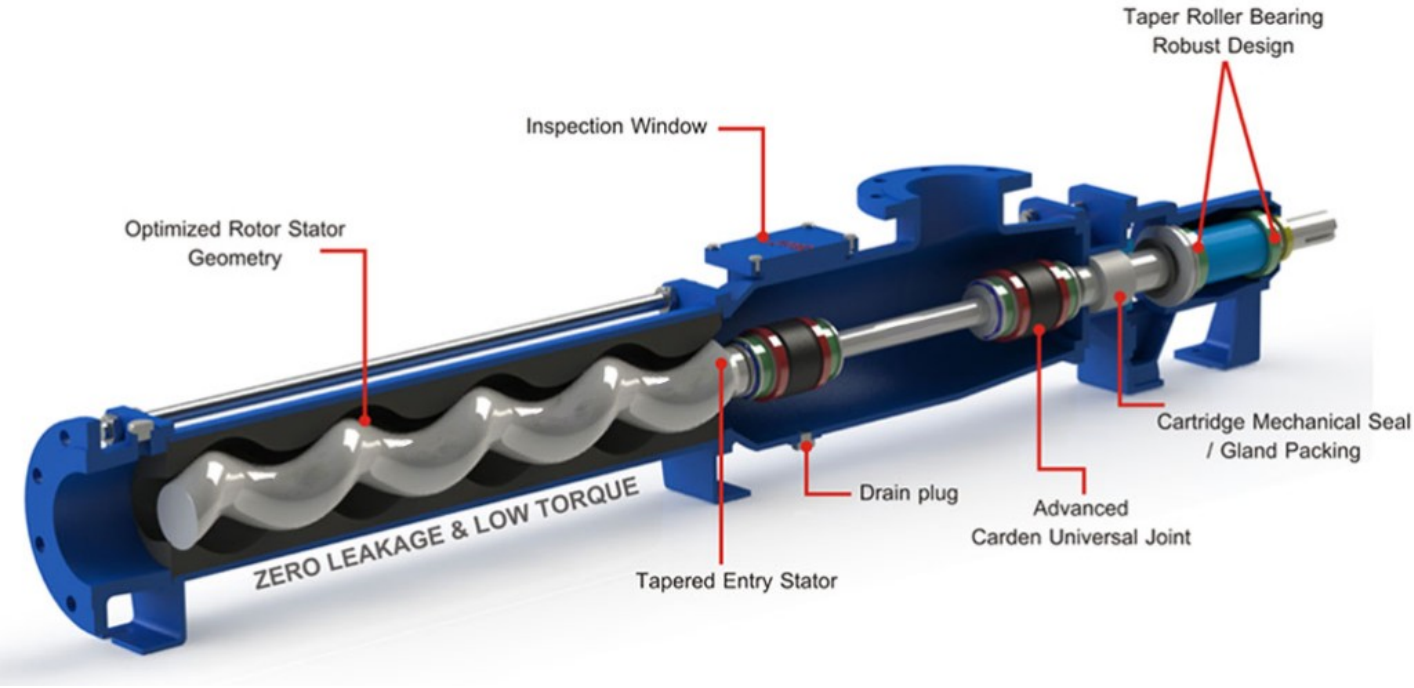
MATERIAL AND CONSTRUCTION

■ Housing :
All grades of cast iron, stainless steel, duplex stainless steel, hastelloy, etc.
■ Stator :
High black nitrile, white nitrile, EPDM, viton, natural, neoprene, silicon, etc.
■ Rotating :
All grades of steel, stainless steel, duplex stainless steel, hastelloy, etc.
■ Shaft Sealing :
Single or double mechanical seal, packing seal

Other corrosion resistant material available on request.

SSC Series, Progressive Cavity Pumps

FEATURES AND BENEFITS



A Viscous and Abrasive Fluids
Its low internal velocity design mean that viscous fluids and those containing solids can be handled effectively e.g. sewage, slurries, and wastewater. In additional, the stator has some flexibility reducing the wear particles cause as the come into contact. This is this reason why a SSC pump is often selected over centrifugal pumps; a design most suited to water or fluids with a similar thickness, or vane and gear pumps that would simply clog with the presence of solids due to their close tolerances.

B Smooth, Low Pulsating Flow
As the fluid progresses through the overlapping cavities steadily at a predictable rate, the SSC design benefits from low pulsation pumping and smooth operation. Less pulsations in the flow of fluid also limits the amount of stress the other components in the installation are put under.

C Low Shear Operation
Thanks to the low internal velocity compared to other pump designs, the SSC pump results in low levels of shearing being applied to the pumped medium. This makes it ideal for handling shear sensitive products that need to maintain their structure during the pumping process.

D Constant Flow
As a progressive cavity pump is able to produce the same flow rate regardless of the viscosity of the medium being pumped, they are an ideal solution for when a constant flow is required but the thickness of the fluid may be variable.

E High Pressures
It can be achieved with eccentric screw pumps, ensuring that even difficult to pump fluids can be pumped over considerable distances.

F Great Suction Lift Capabilities
The SSC pump design benefits from a low Net Positive Suction Head (NPSH), which means that less inlet pressure is required for the pump to operate at the required duty point.
Consequently, they are a good solution when the suction conditions of an application are not ideal.

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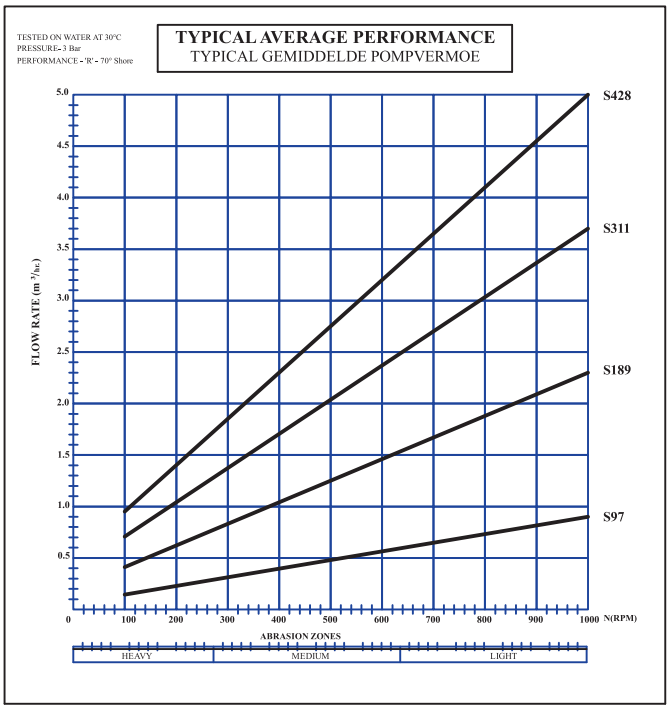
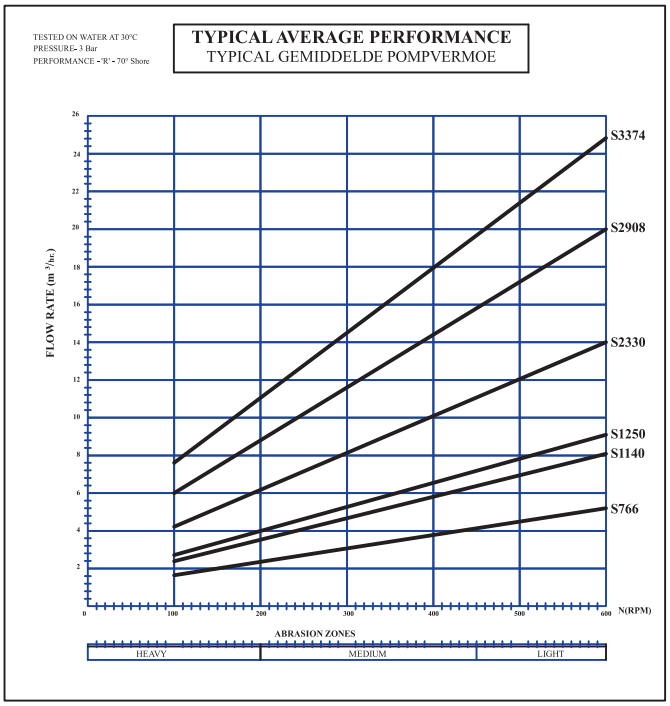
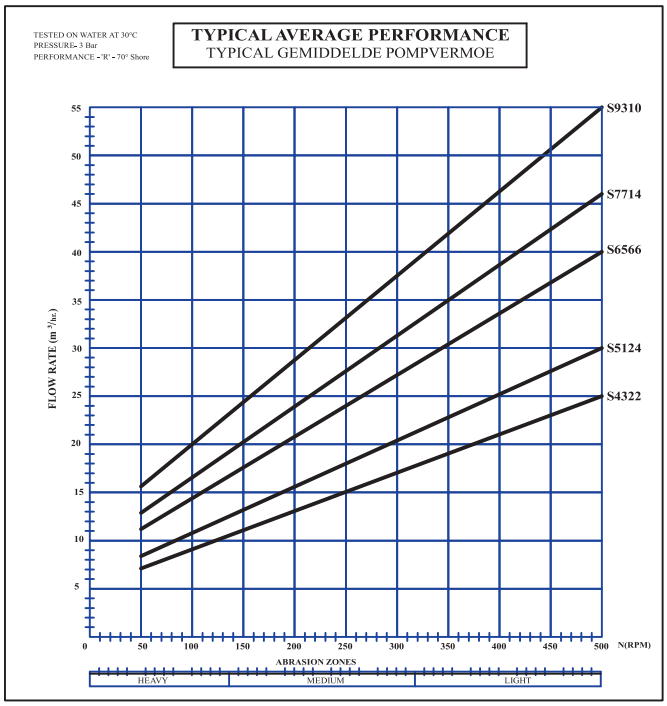
PUMP PERFORMANCE



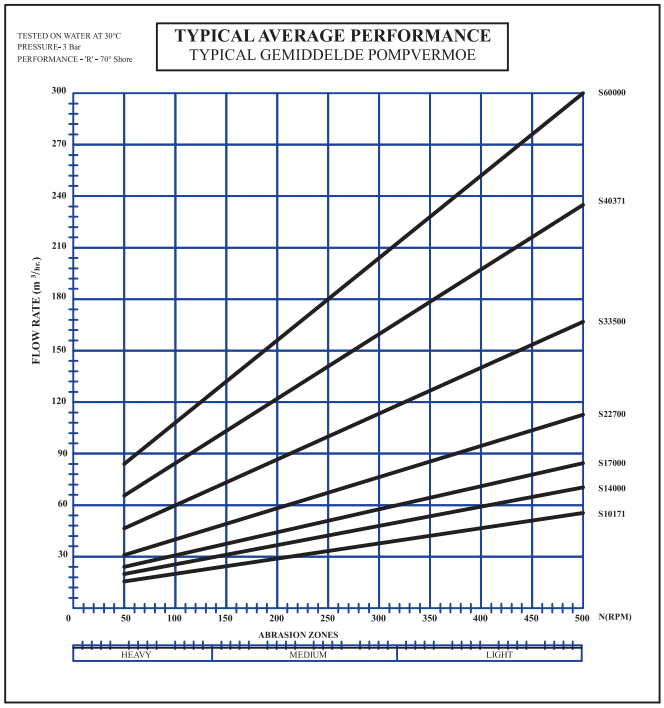
LOW CAPACITY SELECTION



MEDIUM-LOW CAPACITY SELECTION



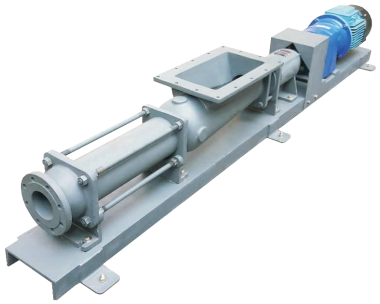
MID-HIGH CAPACITY SELECTION



HIGH CAPACITY SELECTION

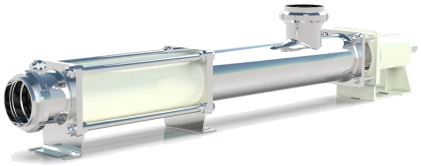
SSC Series, Progressive Cavity Pumps

PRODUCT RANGE OF THE ROTAMAC PROGRESSIVE CAVITY PUMPS



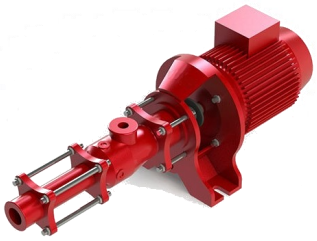
Open Hopper Pump

There are fitted with a feeder hopper and a conveyor screw.
The open-throat design allows the fluid to flow in without restriction while the screw feeds the materials into the rotor/stator.
The pumps are ideal for viscous and heterogeneous fluids pumping.



Food and Hygienic Pump

The pumps are designed for handling food and beverage pumps industrial applications. All metallic parts in contact with the medium being handled are fabricated in smooth finish stainless steel. These food pumps are provided in hygienic quality gland packing or mechanical seal. They are also available with CIP port configuration.

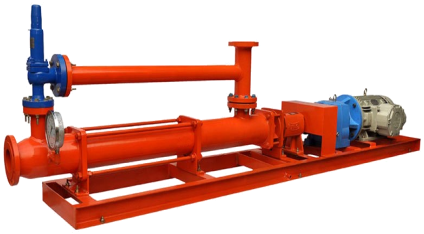


Dosing Pump

This series is specifically designed for low flow, metering, or dosing application. They are used for feeding intermittently, or continuously a controlled quantity of fluid within a pre-determined time or at fixed intervals. The repeatability accuracy has less than 1% fluctuation.

Barrel Pump

This is a vertical self-contained pumping unit that efficiently handles relatively large volumes of liquids. They are perfect for low as well as a high viscous liquid. Because of their lower noise and easy maintenance, they are highly preferred.



Multiphase Pump

The multiphase pumps are designed to enable a high recovery rate of Oil and Gas, these units enable the handling of gas and liquids with a single piece of machinery, which can be distributed across various fields.

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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.