

The Heart of Your Wastewater Treatment Plant

Proven Pumps for Arduous Wastewater Applications



BUILT FOR THE EXTREME

Precision Engineering for the Toughest Wastewater Challenges.

Wastewater treatment is unforgiving. Highly viscous sludge, abrasive grit, rag-laden influent, and fluctuating solids content create operating conditions where conventional pumping technologies often fail. In such environments, "standard" is simply not enough.

You need pumping solutions engineered to withstand arduous applications-resisting wear, preventing clogging and ensuring uninterrupted plant operation.

Proven Pumping Partner

For nearly 60 years, Roto Pumps has supported municipal and industrial wastewater treatment facilities across 55+ countries, delivering reliable performance in handling some of the most demanding sludge transfer, chemical dosing, and dewatering applications.

Our understanding of wastewater pumping was not developed in controlled laboratory environments, but built over decades of managing real-world process challenges across treatment plants worldwide.

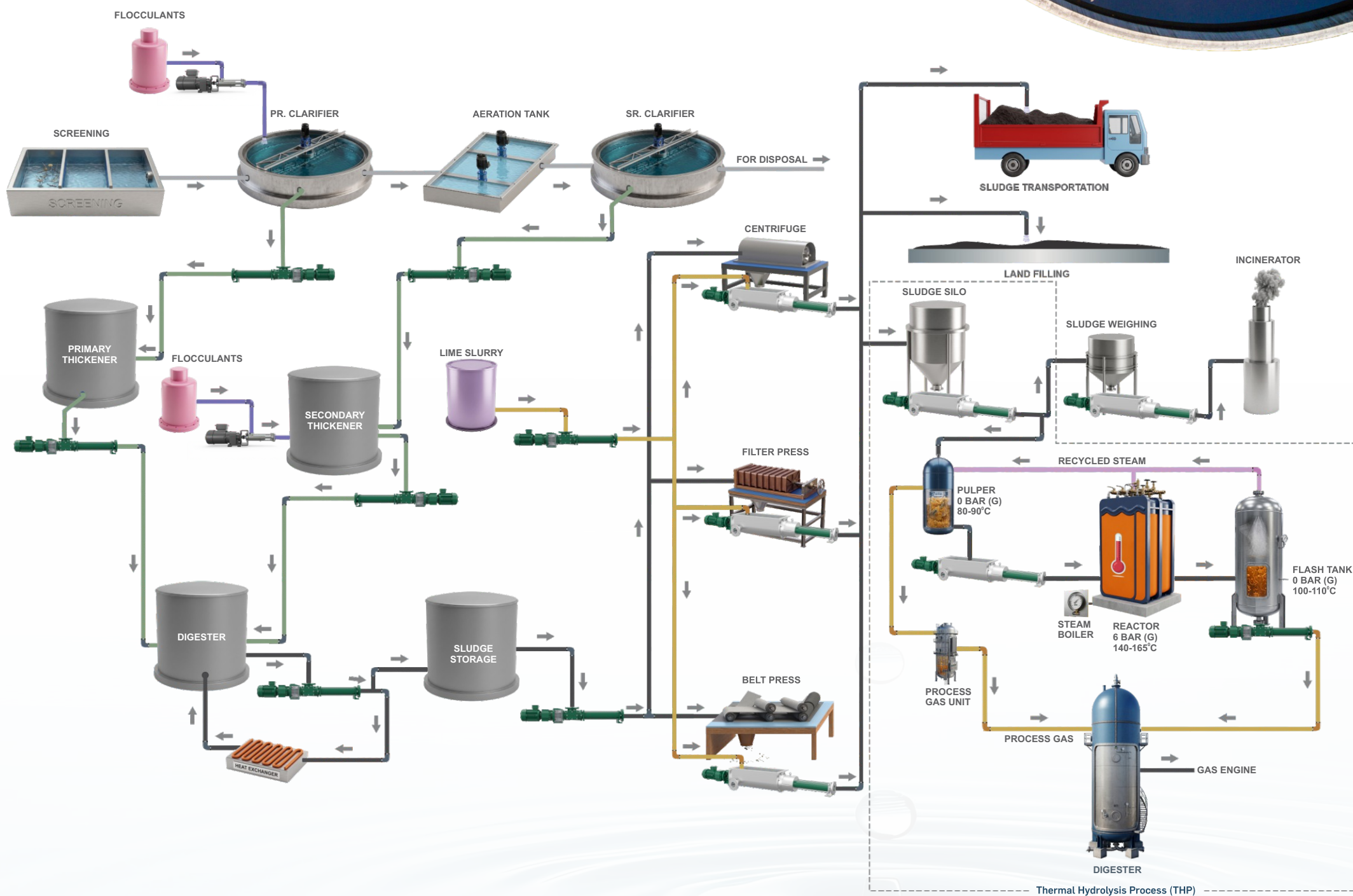
From initial effluent handling to the final cake discharge, Roto Progressive Cavity Pumps powers the entire wastewater treatment life-cycle.

Why Choose Roto®

- Globally Proven Pumps with Over 350,000+ installations worldwide.
- Extensive Experience of Solving 5000+ Fluid Pumping Challenges Across 55+ Industries.
- 7 Strategic overseas establishments with localized sales-service support.
- 5 State-of-the-Art Manufacturing Facilities - Spanning 40,000 sq. meters, equipped with advanced and automated machinery.
- In-house elastomer manufacturing facility equipped with polymer test lab, compund formation to mould design and manufacturing.
- SCADA Based Real Time Test Bed Facility .
- Advanced Surface Treatment Capabilities - In-house hard chrome plating and tungsten carbide coating for enhanced durability.
- Dedicated R&D and Innovation Team - Solving New & Complex Fluid Engineering Challenges.



Flow Diagram of a Typical Wastewater Treatment Plant



Comprehensive Pump Range for Wastewater Industry

Progressive Cavity Pumps

Flow: Up to 550 m³/hr / 2400 GPM
Pressure: Up to 48 bar / 700 PSI

Engineered for superior efficiency and reliability in fluid handling. Featuring a unique thrust bush joint, these pumps deliver robust performance, a compact design and exceptional adaptability across diverse industrial applications.



Roto KWIK Pumps with Wear Compensation Stator

Flow: Up to 360 m³/hr / 1585 GPM
Pressure: Up to 24 Bar / 350 PSI

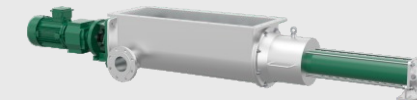
Designed on the "Maintenance in Place Platform", Roto KWIK Pumps offers easy & quick maintenance of rotor and stator without dismantling suction and delivery pipelines. For arduous applications, pumps equipped with wear-compensation stators for extended stator life are available.



Roto Cake Pumps

Flow: Up to 50 m³/hr / 220 GPM
Pressure: Up to 24 Bar / 350 PSI

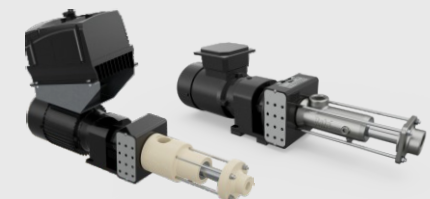
Designed to handle highly viscous, non-flowable sludge cake with up to 45% dry solids. Featuring a spacious feed hopper (up to 2000 mm), a separate compression zone, an enlarged auger feed screw, they ensure efficient and reliable conveying.



Chemical Dosing Pumps

Flow: Up to 500 LPH / 132 GPH
Pressure: Up to 24 Bar / 350 PSI

Engineered for precise and pulsation free dosing of chemicals with high accuracy of +/- 1%. Available in standard metallic configurations and engineered CPVC construction for aggressive chemical dosing.



Vertical Pumps

Flow: Up to 200 m³/hr / 880 GPM
Pressure: Up to 48 Bar / 700 PSI

These pumps are designed for applications where space is a constraint and are available in barrel lengths to suit diverse sump depths.



One Reliable Partner for Complex Wastewater Applications



Preliminary Sludge Treatment

- **Raw Sewage (Post-Screen):** Transfers wastewater containing macerated fibrous material and residual solids without clogging.
- **Grit-Laden Slurry:** Handles abrasive mixtures of sand, gravel, water with enhanced wear resistance and extended service life.
- **Floating Scum & Grease:** Pumps viscous & sticky layers of fats, oils and grease efficiently from clarifiers.
- **Macerated Screenings:** Transfers shredded fibrous debris and high-solid slurry to disposal units.

Secondary Treatment

- **RAS & WAS Transfer:** Gentle pumping of Return and Waste Activated Sludge without shearing biological flocculants, ensuring efficient settling and process stability.
- **Digester Feed:** Reliable transfer of high-viscosity sludge into pressurized anaerobic digesters at consistent feed rates for stable digestion and optimal biogas production.



Sludge Thickening & Advanced Digestion

- **Thickened Sludge Transfer:** Reliable pumping of high-viscosity sludge (typically 6–10% solids) from thickeners to holding tanks or advanced pre-treatment systems.
- **Digester Recirculation:** Continuous sludge circulation to prevent stratification and maintain solids suspension for efficient digestion.
- **Centrifuge Feed:** Smooth, pulsation-free sludge transfer to maintain separation efficiency.
- **Filter Press Feed:** Reliable pumping across variable flow and pressure conditions for effective chamber filling and cake compaction.



Cake Transport & Disposal

- **Dewatered Sludge Cake Transfer:** Hopper-fed pumping of stackable sludge cake from centrifuges or filter presses for continuous downstream transfer.
- **Incinerator Feed:** High-pressure, non-pulsating injection of sludge cake for stable combustion and temperature control.
- **Thermal Dryer Feed:** Controlled mass flow of wet cake to maintain dryer efficiency and prevent process imbalance.
- **Silo Extraction & Truck Loading:** Reliable discharge and transfer of compacted sludge cake for storage or off-site disposal.

Thermal Hydrolysis Process (THP)

- **Pulper Feed:** Continuous transfer of thickened raw sewage sludge (14-18% dry solids) into the dynamic pulper for homogenization and pre-heating.
- **Reactor Feed:** Pumping of warm, pre-conditioned sludge into sealed reactors for high-pressure steam injection and complete pathogen sterilization.
- **Hot Sludge Transfer:** Reliable discharge of hot, pasteurized sludge from the flash tank, through heat exchangers, and directly into the anaerobic digesters.
- **Back-mixing & Dilution:** Controlled blending and pumping of dewatered sludge with dilution water to maintain optimal back pressure for continuous downstream flow.



Chemical Dosing

- **Polymer Dosing:** Accurate, low-shear dosing of shear-sensitive polymers for improved flocculation and dewatering efficiency.
- **Lime Slurry Dosing:** Handling of abrasive lime slurry while maintaining consistent flow to prevent settling.
- **Filtration Feed:** Pulsation-free feed to Membrane Bioreactors and disc filters, ensuring stable flow and protecting sensitive membrane or filtration media.



ROTO PUMPS LTD.

Regd. Off. & Global Headquarters

14, Roto House, Noida Special Economic Zone,
Noida-201305, UP, India
Tel: +91 120 2567902-5, Fax: +91 120 2567911
Email: contact@rotopumps.com
CIN: L28991UP1975PLC004152

Overseas Establishments

Roto Pumps Ltd., UK

Email: sales@rotopumps.co.uk
Web: www.rotopumps.co.uk

Roto Pumps Ltd., Australia

Email: sales@rotopumps.com.au
Web: www.rotopumps.com.au

Roto Pumps North America Inc.

Email: sales@rotopumps.us
Web: www.rotopumpsna.com

Roto Pumps MENA FZE

Email: sales.mena@rotopumps.com
Web: www.rotopumps.com

Roto Pumps Africa (Pty.) Ltd.

Email: sales@rotopumps.co.za
Web: www.rotopumps.co.za

Roto Pumps GmbH

Email: sales.rpg@rotopumps.com
Web: www.rotopumps.de

Roto Pumps (Malaysia) Sdn. Bhd.

Email: salesmy@rotopumps.com
Web: www.rotopumps.com.my

