Roto pumps
since 1968

WE COMPETE WITH ONLY ONE PUMP



HEAVY-DUTY

PROGRESSIVE CAVITY PUMPS

For Mining & Explosive Industry

Partner in Success

Roto's journey began with supplying our very first pumps to the mining industry. With over 55 years of experience, we have developed strong associations with leading mining and explosive companies, gaining deep insights into the industry's major pumping challenges. This knowledge has enabled us to consistently deliver high-quality products worldwide. Driven by passion and commitment, Roto team has designed and developed a comprehensive range of progressive cavity pumps and systems to effectively handle all mining and explosive applications.

Roto Mining Station

Roto Mining Station redefines efficiency in the dewatering process with its unparalleled reliability and comprehensive turnkey solutions. Designed to meet all your mine dewatering needs, these stations are capable of handling high-pressure media and offers great resistance to hyper saline water and abrasive media. This ensures superior performance and reduced operational costs.



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Features & Benefits

- **High Pressure Capability:** Capable of pumping media at a very high pressure of up to 48 bar (696 PSI), thus eliminating the need for multiple centrifugal pumps to achieve the same duty parameters.
- **Constant Flow Rate:** Maintains nearly the same flow rate under varying pressure conditions to maximum rating of the Pump.
- **Solid Separations Tank:** Equipped with screens to filter out large solid particles, ensuring uninterrupted operation and protecting downstream equipment from damage.
- **Removable Inspection Ladder:** Facilitates ease of inspection, maintenance, and troubleshooting, reducing downtime and ensuring optimal performance.
- **Belt and Pulley Drive Design:** Designed to safeguard motor connections, ensuring safe and reliable operation in demanding mining environments.
- **Options for Additional Features:** Choose from a range of optional features including anti-reversing clutches, float level switches and allowing customization to specific site requirements and operational needs.
- **Options for Different Configurations:** Tailor your pump configuration with a progressive cavity pump equipped with constant wall stator. This option optimizes performance for specific applications by reducing overall length while significantly increasing head capacity.

Material of Construction - Mining Station

- Tank – Mild Steel
- Base Plate – Mild Steel
- Manifold – Mild Steel
- Gate & NRV Valves - Carbon Steel
- Pulley – Cast Iron
- Ladder/Platform – Mild Steel
- Header – Mild Steel
- V-Belt Pulley Guard – Aluminium/Mild Steel /Poly-fabricated
- Wire Mesh - Stainless Steel

Mining Station Dimension Details

Pump Model	RFAA 086	RFAA 088	RFAA 103	RFAB 103
Pump Length (mm)	5223	6040	4309	3767
Tank Capacity (Ltrs)	6400		4800	
Skid Dimension L*W*H (mm)	7416x3670x2715		5600x2500x2500	

* Tank Capacity & Mining Station dimensions may vary as per customer requirement.
* Models under development - RFA 084 / 104 / 106

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Roto FLEX - Flexible Shaft Series Pump

Specially Designed High-Pressure Pumps for Efficient Mine Dewatering

In underground mining, effectively managing excess groundwater is crucial for ensuring safety and productivity. Roto's high-pressure flexible shaft series pumps provide a reliable solution for pumping out accumulated water, maintaining optimal excavation conditions and stability. With advanced design features such as the elimination of universal cardan joints or gear joints, Roto pumps minimize wear and ensure long-lasting performance.

1. Rotor

Featuring a double hard chrome plated rotor to ensure exceptional resistance to wear and reduce operational costs. Tungsten carbide rotor options are available for an extended lifespan in more arduous applications.

2. Stator

Abrasion-resistant stators are available in natural or nitrile elastomer options, guaranteeing durability and optimal performance even in harsh mining environment.

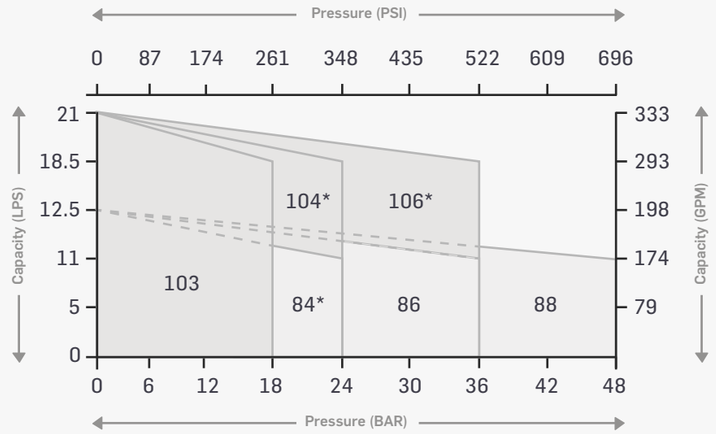
3. Flexible Shaft

Halar coated flexible shafts eliminate the need for universal joints and provide a maintenance-free and reliable drive train.

4. Gland

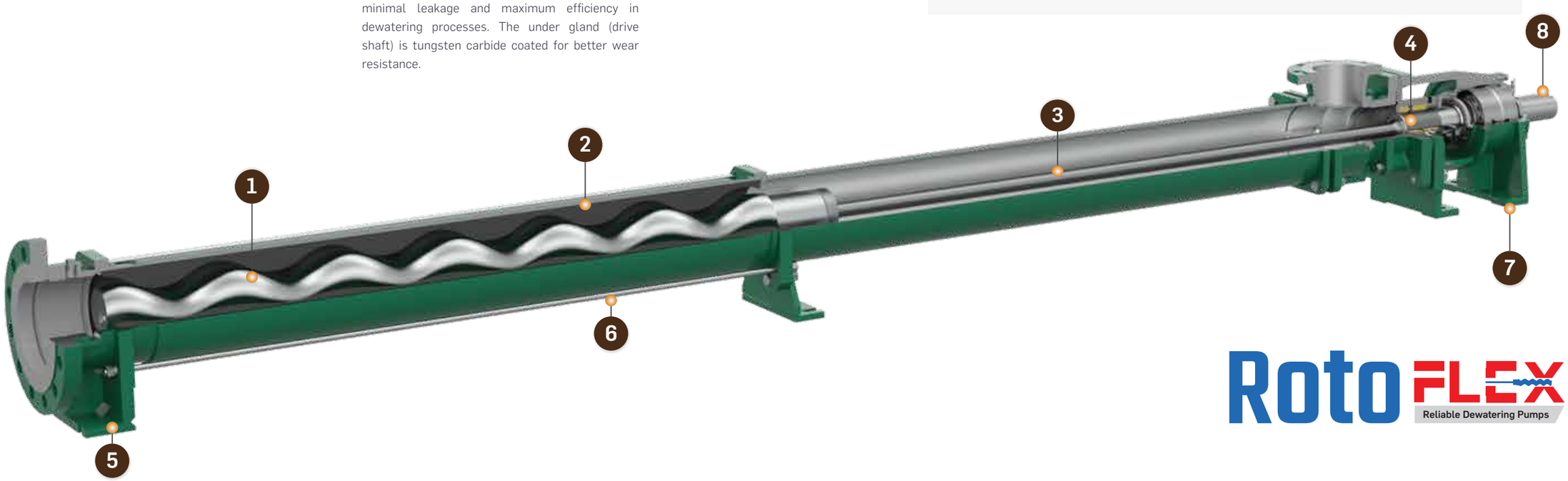
Experience superior sealing performance with graphite impregnated glass yarn packing and lantern rings as standard features, ensuring minimal leakage and maximum efficiency in dewatering processes. The under gland (drive shaft) is tungsten carbide coated for better wear resistance.

Pump Performance Range



Performance at 400 RPM

* Models under development



Roto FLEX Reliable Dewatering Pumps

5. End Cover

The stainless steel end cover significantly reduces the effects of erosion and corrosion.

6. Tie Rods

These Pumps have Tie Rod design. Pumps operating above 18 bar (261 PSI) pressure have provision of anti-rotation rings eliminating Stator movement during operation.

7. Bearing Housing

Bearing Housing is provided in upgraded Cast Steel as a standard.

8. Drive Shaft

Our pumps are equipped with extensions for mounting anti-reverse clutches, effectively preventing shaft rotation.



Roto Flex Pump Handling Hyper Saline Mine Water with Suspended Solids

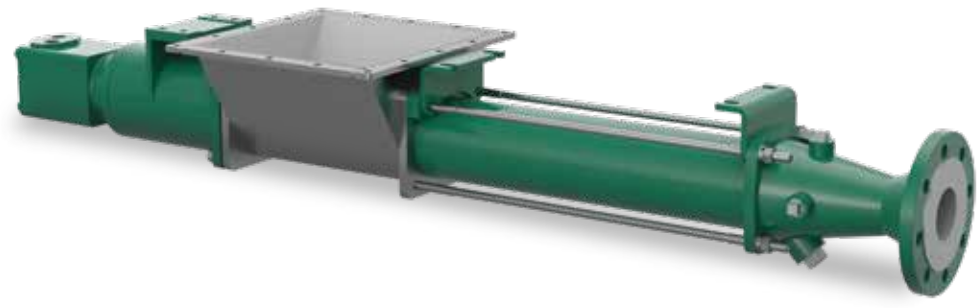
Mining Applications

- Gland Water Supply
- Stage Dewatering
- High Pressure Wash
- High Head Dewatering
- Water Spray for Dust Suppression
- Surface Dewatering

Explosive Pump Range

Roto offers a diverse range of pumps specifically designed for handling explosive applications, prioritizing safety and reliability to meet the stringent demands of mining engineers. Trusted by industry leaders, these pumps deliver consistent performance and safely handle various grades of explosive slurries, including:

- Ammonium Nitrate Mixtures
- Straight & Doped Emulsions
- Oil Phase Emulsions.



Engineered Pump for Mounting on Explosive Vehicles

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Mobil Manufacturing Unit (MMU) with Mounted Pumps run via Hydraulic Motors

Explosive Applications

- Site Mixing Systems (SMS)
- Bulk Explosive Handling
- Premix Emulsion Handling
- Explosive Cartridge Filling
- Oxidizer Nitrate Transfer Pumps
- Dosing of Explosives

Mineral Processing & Wastewater Applications

- Barrel/Bulk Transfer
- Transfer of Mineral Slurries
- Froth Flotation Process
- Sludge Feed to Dewatering Machines
- Mortar with Fine Oily Water
- Chemical Dosing
- Flocculants & Polymer Dosing
- Oily Water Separator Pumps
- Oils and Fuel Transfer
- Centrifuge Filling
- Water Treatment
- Cake Transfer





since 1968

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