

## **ANDRITZ**

Pump solutions for mining





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# Tailor-made pumping solutions

Are you looking for safe and effective solutions in mining water management? ANDRITZ is one of the leading manufacturers of pumps for water management and emergency drainage in surface and underground mining.

Safety and reliability are the greatest necessities in surface and underground mining in order to ensure that there are no disruptions in extraction. Mine operators around the world trust the single-flow and double-suction submersible motor pumps from ANDRITZ in order to remove mine water reliably from operating areas. If rescue pumps are needed to drain water from mines reliably and quickly in emergencies, the patented HDM technology is the best possible solution to keep people and the environment safe.

#### **HDM** – **Heavy Duty Mining**

Two pumps are arranged one above the other, running in counter direction and driven by a continuous pump shaft. Splitting

#### Advantages at a glance

- Deployment under extreme conditions
- Highest operating reliability
- Long service life
- Maintenance-free operation
- High-grade materials

the workload between both pumps ensures complete axial thrust balancing and thus contributes towards solving the problems of force effects on the unit and loads on the thrust bearings; at the same time, the flow and suction speed outside the pump is halved. Thus, well walls are protected around the suction areas, and the intake of abrasive particles is minimized. ANDRITZ submersible motor pumps with HDM-Technology provide maximum operating reliability, minimal wear, and long service life, which can often be more than 20 years.

#### **Further technologies**

MST (Modular Shaft Technology) allows easy adaptation to changing pumping conditions.





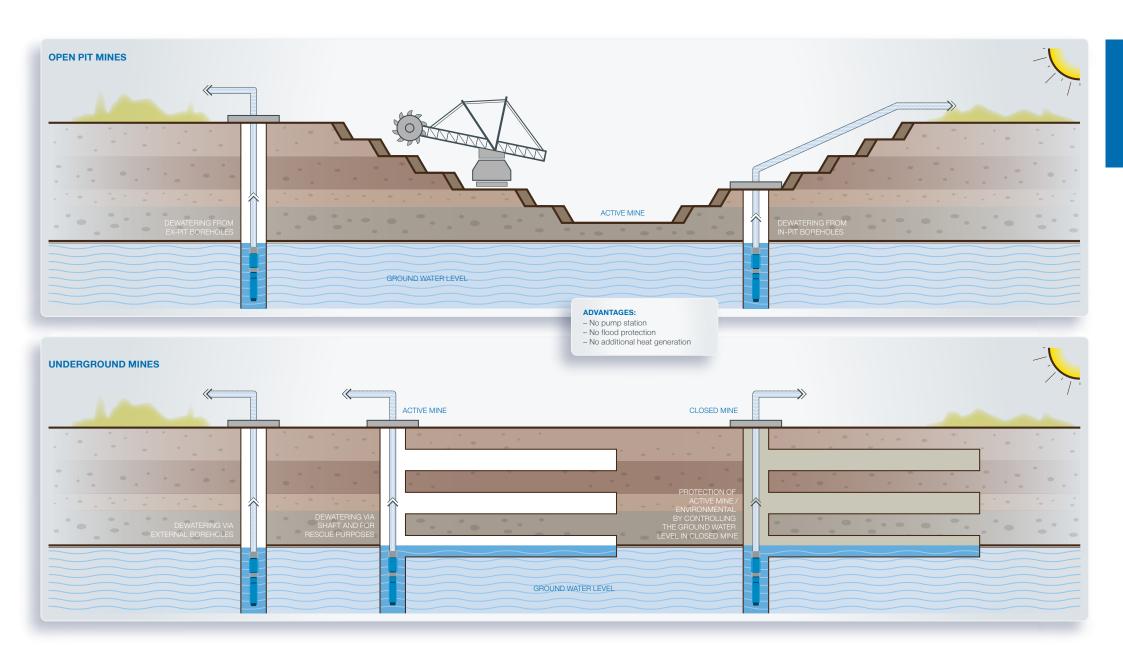
MCT (Modular Cooling Technology) enhances durability, and is at the same time the most efficient possible means of cooling submersible motors.

IPM (Interior Permanent Magnet Motor) the new premium class submersible motors with highest efficiencies over a wide performance range.

For complete information on our technologies kindly refer to our brochures and videos.









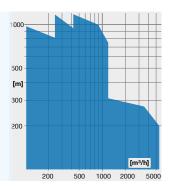
### **Pump types**

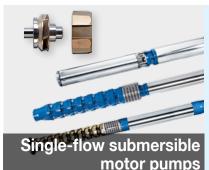
## for operation in mining



- Flow rate
  up to 6,000 m<sup>3</sup>/h
- Head up to 1,500 m
- Pressure up to 150 bar
- Well diameter from 20"
- Temperature up to 75° C

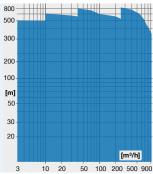
Multi-stage, double-flow submersible motor pumps. Compensation of axial thrust and halved flow velocity guarantee for longest service life even under most extreme operation conditions.





- Flow rate up to 900 m<sup>3</sup>/h
- Head up to 800 m
- Pressure up to 100 bar
- Well diameter from 6"
- Temperature up to 75° C

Multi-stage, single-flow submersible motor pumps. Absolutely reliable, maintenance-free and extremely long-lasting. With MST-Technology the pump may not only be flexibly adapted to changing pumping conditions but is furthermore also saving storage costs.

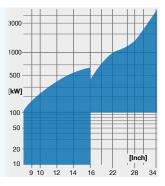




■ Power up to 5,000 kW

- Voltage up to 14,000 V
- Well diameter from 8"
- Temperature up to 75° C

Water-filled and water-cooled submersible motor. For consistently strong performance at high temperatures, special voltages and in extreme conditions. MCT-and IPM-Technology for perfect cooling and highest efficiencies.

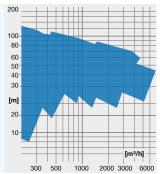






- Highly wear-resistant single-stage centrifugal pumps
- Flow rate up to 6,000 m³/h
- Head up to 160 m
- Pressure up to 25 bar
- Efficiencies up to 80%

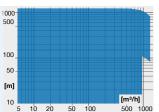
Single-stage centrifugal pumps with closed, semi-open, or open impeller also available in highly wear-resistant design. Various material combinations available for most varied applications guarantee for long life cycles and outstanding efficiencies.





- Flow rate up to 1,400 m<sup>3</sup>/h
- Head up to 1,000 m
- Pressure up to 100 bar

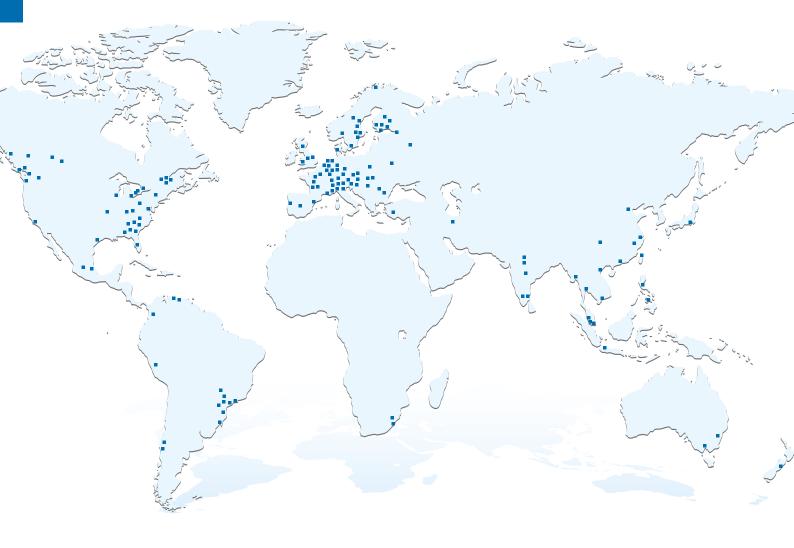
Multi-stage high-pressure pumps in horizontal and vertical design. Manufactured in material variants of cast iron, bronze, aluminium-bronze or stainless steel.





#### Close to our customers

### ANDRITZ locations worldwide



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