

Sluicer

Upper Dordi A Hydropower Plant, Nepal

Challenge

Upper Dordi A is a 25 MW run-of-river hydropower plant located in the Himalayan region of Nepal. The snow-fed Dordi Khola River carries significant sediment loads, including quartz-rich particles that can cause severe turbine wear. The original design required two desander basins to ensure continuous operation and sediment removal.



Upper Dordi A intake and desander location



Three SediCon Sluicers integrated into the desander design

Solution

SediCon optimized the original design by replacing the two-basin desander configuration with a single desander equipped with three SediCon Sluicers. The system continuously removes settled sediments while maintaining uninterrupted power generation.

The solution was designed for low water consumption and high sediment handling capacity, allowing efficient sediment removal while minimizing operational losses and protecting downstream equipment.



Project Location

Project facts

Client: Liberty Energy Company Ltd.
Project: Upper Dordi A HPP
Location: Nepal
Technology: 3 x SediCon Sluicers
Installed capacity: 25 MW
Annual production: 138 GWh
Net head: 300 m
Design discharge: 9.8 m³/s

Results and benefits

- Single basin desander solution
- Capacity up to 2,000 t/h
- Water consumption 5 m³/m³ sediment
- Continuous power production
- Reduced turbine wear
- Simplified plant design

For more than 30 years, SediCon has developed and supplied proprietary sediment handling technologies from Trondheim, Norway. Our solutions for reservoirs, intakes, desanders and tunnels have been successfully implemented in hydropower projects in more than 20 countries across five continents.