

Boulder Excluder

Ulla Førre, Norway

Challenge

Flood events in Nystølbekken transport large volumes of gravel, stones and boulders into the intake pond. Sediment accumulation reduced intake capacity and material passing the trash rack entered the tunnel system, causing sediment accumulation and reduced hydraulic performance.



SediCon team and client during installation



Commissioned and discharging sediments in June 2023

Solution

SediCon designed and supplied a custom HDPE Boulder Excluder capable of automatically removing boulders up to 600 mm in diameter. The system operates using the proven siphon principle and utilizes only surplus water during flood events, when sediment transport is at its highest.

The lightweight HDPE construction was transported to site by helicopter and installed, tested and commissioned in less than two days. The Boulder Excluder operates without external power, moving parts or operator intervention, providing reliable long-term sediment management.



Project Location

Project facts

Client: Statkraft
Project: Ulla Førre HPP
Location: Norway
Technology: Boulder Excluder
Installed capacity: 2,100 MW
Annual generation: 4.5 TWh
Storage capacity: 8 TWh

Results and benefits

- Rapid and cost-effective installation
- Automatic sediment removal during floods
- No moving parts and minimal maintenance
- No loss of production water
- Helicopter transportable
- Removes boulders up to 600 mm

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.