

Boulder Excluder

Brattset HPP, Norway

Challenge

The Nova brook intake at Brattset Hydropower Plant is located in a steep canyon where large quantities of gravel, stone and boulders are transported during flood events. Material up to nearly one meter in diameter frequently accumulated in front of the intake, reducing capacity and requiring costly maintenance interventions.

The remote location, without permanent power supply or communication infrastructure, limited the range of practical sediment management solutions.



Boulder Excluder installed and ready for decades of service



Challenging installation in a narrow gorge!

Solution

SediCon designed and supplied a custom 1000 mm Boulder Excluder capable of removing boulders up to 800 mm in diameter. The system operates automatically using the siphon principle and utilizes surplus water during high-flow periods, precisely when sediment transport occurs.

With no moving parts, no external power requirements and no operator intervention, the Boulder Excluder provides reliable sediment removal while maintaining uninterrupted power production.



Project Location

Project facts

Client: Trønder Energi AS
Project: Brattset HPP
Location: Ulsberg, Norway
Technology: Boulder Excluder
Installed capacity: 80 MW
Annual generation: 352.7 GWh

Results and benefits

- Removes boulders up to 800 mm
- Automatic flood operation
- No production water loss
- No moving parts
- No external power required
- Suitable for remote locations

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.