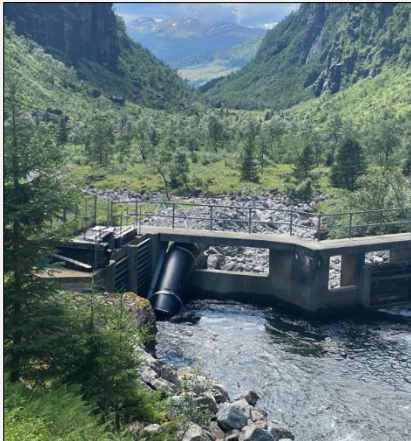


## Gravel Excluder for Tyso Intake, Norway

Without any intervention and without any loss of water for production, the SediCon Gravel Excluder at Ulvik hydroelectric plant removes gravel, stones and boulders up to 1,0 m size and maintains the intake open at all times.



Gravel Excluder upstream



Gravel Excluder discharge

- Project Description:** Tyso intake feeds the transfer tunnel that supplies water to the main reservoir of the Ulvik Hydroelectric Powerplant in western Norway. The Hydroelectric Plant has an installed capacity of 20 MW, with a design flow of 10 m<sup>3</sup>/s and a gross head of 387 m.
- Location:** Ulvik, Hordaland, Norway.
- Sediment Challenge:** Material transported as bedload to Tyso intake can be up to almost a meter in size and often causes partial blockage of the intake. The structure is 3 km from the road, without electricity or communication, limiting the solutions that can be implemented.
- Solution:** SediCon supplied a 1200 mm outer diameter Gravel Excluder, capable of removing rocks up to 1,0 m in diameter. The Gravel Excluder uses the siphon principle and removes sediments in front of the intake every time there is flood, and thus surplus water and sediment transport. It is made with no moving parts and works entirely without any intervention or monitoring. It is primed (started) only when there is sufficient surplus water in the river and stops automatically when the water level drops.
- Implementation:** Installation of the Gravel Excluder was successfully completed during October 2020. Due to lack of access by road, the HDPE components were flown in by helicopter, assembled and installed in the intake structure with light tools.
- Results:** The equipment has been working properly during its first year of operation, keeping the intake free of material during flood season.

SediCon is the leading supplier of sediment handling worldwide and provides reliable solutions with low water consumption and uninterrupted power production.