MJ2 technologies
Conception et Fabrication de Turbines Hydroélectriques

CASE STUDY

CANAL D'HUNINGUE
HPP CASE STUDY

VLH	DN 3350	DN 3350
NET HEAD	1.42 m (4.6 ft)	1.98 m (6.5 ft)
NOMINAL FLOW	13 m^3/s (460 cfs)	13 m /s (460 cfs)
NOMINAL OUTPUT VLH (at grid level)	142 kW	198 kW
AVG ANNUAL PRODUCTION	2.4 GWh/year equivalent to 240,000 €	
OVERALL INVESTMENT COST	1 M € for the 2 HPP	
SIMPLE PAYBACK	4 years	

The installation of the **VLH** at the Canal d'Huningue, considered the development of two historic navigation locks with minimal flood bypass requirements.

The Canal d'Huningue is a historically protected area where visual integration and low noise impact were key development constraints.

The canal is also used by a two century old salmon farm for reintroduction of salmon juveniles into the Rhine River.

The fish friendliness characteristics of the **VLH** were instrumental in the approval decision made by the regulatory authorities.


Empty navigation lock before VLH


VLH & Electric Equipment in working position

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CANAL D'HUNINGUE HPP CASE STUDY

The project consists of harnessing low heads at two locks on a historical navigation canal which is currently only used for water transport.

A **VLH** DN 3550 turbine was installed on a steel substructure at each lock. No civil work was required with the full load of the **VLH**'s transmitted to the existing foundation by the supporting structures.

Welded Steel supporting structure

The Integrated Power System was installed in 2 prefabricated containers, located just behind each VLH and at ground level in order to minimize visual impact.

Inside and outside the prefabricated building of Huningue Navigation Lock No. 3

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