



# HPP Rott, Austria

*Hydro Steel Structures*

**künz**

Kuenz was responsible for all of the hydromechanical equipment, as well as the trash rake cleaning system.

# Kuenz designed and built the hydromechanical equipment for the Rott Hydropower Plant.

Markus Matschl,  
Project Engineer, Salzburg AG

*„Despite the extreme cost pressure, Kuenz was able to design and successfully implement an ideal construction with the best available technology.“*



The weir with the three gates, of which each gate has a clear width of 9 meters.



The Rott hydropower plant at the German–Austrian border on the Saalach River is located above the Saalach Bridge next to Freilassing, Germany, but still within the city limits of Salzburg, Austria. Due to its advanced age, the former power plant was technically and economically obsolete. Therefore, the owner and operator, Salzburg AG, decided to build a completely new power plant a few meters beyond the existing installation. The power plant was put into operation after about eighteen months of construction.

## Technical information – weir

The weir is designed as a three-bay weir with flap gates. Each gate has a clear width of 9 meters and a storage level of 8.5 meters. Each gate has two hydraulic drive cylinders with a ceramic-coated rod. The construction has a special engineering feature that is particularly important in case of an emergency: If one hydraulic

cylinder fails, the gate is held on one side by the remaining functional cylinder.

## Technical information – power plant

Kuenz was responsible for the intake rack and intake stop logs, as well as the draft tube stop logs, which are equipped with a hydraulic lifting unit. The intake stop logs consist of five elements with a clear width of 6.5 meters and a height of 2.5 meters.

## Technical information – Trash rack cleaning

Kuenz also delivered the trash rack cleaning machine, type H500. This new concept works on the principle of a hydraulic arm, which is similar to an excavator. The unit is designed so that the intake stop logs can be set and stored. The cleaning cycle runs in semiautomatic mode.

## Specific feature and challenge.

The powerhouse is located in Germany due to the configuration of the turbine inlets, which are located on a curve of the Saalach River on the German side. Furthermore, due to the Eco-Electricity Act, government aid from Germany for a power plant of that size was more generous, which was a benefit for the project's profitability.

In addition to the price aspect, a significant reason for the contract award by Salzburg AG to Kuenz was our engineering experience with systems, such as using the trash rack cleaning machine to set intake stop logs. Kuenz's services for this project included consulting, engineering, manufacturing, assembly, commissioning and training, as well as all benefits like material testing, documentation and approvals.

Technisches zum Projekt	
<b>Data power plant:</b>	
Nominal flow	1,145 km <sup>2</sup>
Average yearly output	27,200 MWh
Maximum capacity	5.000 kW
Gross head	10.1 m
Design flow	58.5 m <sup>3</sup> /s
Construction time	18 months
Number of weirs	3
Number of turbines	2
<b>Data weir gates:</b>	
Pressure gates with flaps	3
Clear width	9 m
Clear height	9.6 m
Clear width flaps	7 m
Clear height flaps	3 m
<b>Data intake rack:</b>	
Type of rack	diagonally supported
Clear width	2 x 6.5 m
Clear height	8.1 m
<b>Data intake stop logs:</b>	
Number of stop logs	5
Clear width	6.5 m
Clear height	2.5 m
<b>Data trash rack cleaning machine</b>	
Type	TRCM-H500
Width of rack	2.5 m
Cleaning depth	14,7 m
Rack inclination	18°
Cleaning force at the rack	30 kN
Hoisting speed	20 m/min
Length of track	47 m
Extras	Setting of stop logs Electrical chain hoist



# The best references are successful projects.



## HPP Hagneck, Switzerland

Kuenz provided the hydro-mechanical equipment for the new Hagneck hydro power plant of Bielersee Kraftwerke AG in Switzerland. The following components were installed: Stoplogs for intake and draft tube, intake trash racks, vertical spillway stoplogs and four radial gates with flap on top. The Kuenz trash rack cleaning of type GE-85 completed the scope of supply.

## HPP Rothleiten, Austria

Customer Frohnleiten Energie- und Liegenschaftsverwaltung GmbH ordered Kuenz hydro-mechanical equipment and a trash rack cleaning machine type H1000 for the Rothleiten facility in Austria. Kuenz installed three radial gates with flap on top, spillway stoplogs. Further the scope included intake stoplogs, intake trash racks and draft tube gates. Also intake trash racks were part of the scope.



## HPP Ashta 1, Albania

Kuenz supplied hydro-mechanical equipment and a trash rack cleaning machine type H500 for the Ashta I hydroelectric station in Albania. Intake trash racks, intake stoplogs and draft tube stoplogs were included in the Kuenz scope.

Further information: [www.kuenz.com](http://www.kuenz.com)



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