doro Turbinen GmbH
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doro-Turbine GmbH develops **plug & play hydropower plants** that will deliver electricity to millions of people in off-grid communities and can be described as...

simple **reliable** **affordable**

Affordability and accessibility of renewable electricity is a common problem. Even today, the production costs of renewables are high and it is difficult to raise the initial investments especially in remote areas. Common hydropower is known as one of the cheapest renewable energy sources, however, it is highly centralised and needs appropriate infrastructure to be distributed.

The doro-C Container is a cost-effective micro hydroelectric power plant for the local and reliable production of renewable energy. Furthermore, the **ecological impact is minimized** as doro utilizes smaller potentials, which are **evenly distributed** over the globe.
Due to the new doro technology, which enables mechanical **efficiencies of over 90%**, the generation costs range from **€ 0.04 to € 0.08 / kWh**. Considering the same turbine size, the double rotation technology enables us to triple the performance compared with highly developed water wheels.

doro-C comes totally prefabricated in a **20ft standard container**, which includes not just the turbine itself, but also the entire automation system as well as the electrical components. This makes doro-C the first **plug & play hydroelectric power plant for non-experts.**

Technical details
All-in-one plug & play hydropower container for very low head applications in

a) **isolated operation** (automatic load control)
and/or
b) **feed-in operation for** (micro-)**grids**
(completely autonomous load control or connected to central control)

30 kW rated power
130.000 kWh to **250.000 kWh per year**
(depending on the availability of full water amount)

Target costs based on complete installation:
EUR 120.000 or EUR 4.000 / kW

Lifespan
>15 years with **5 years major maintanance cycles**

Site conditions (single unit; multiple setups also available)
1) 0,5 - 3,5 m³/s flow rate and
2) 0,7 - 1,5 m head
a) isolated (stone ramp, overflow, weir, etc.) or
b) along a distance of about 10 to 50 meters

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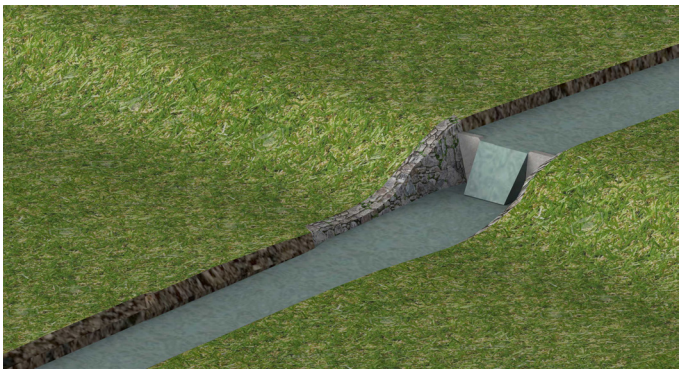
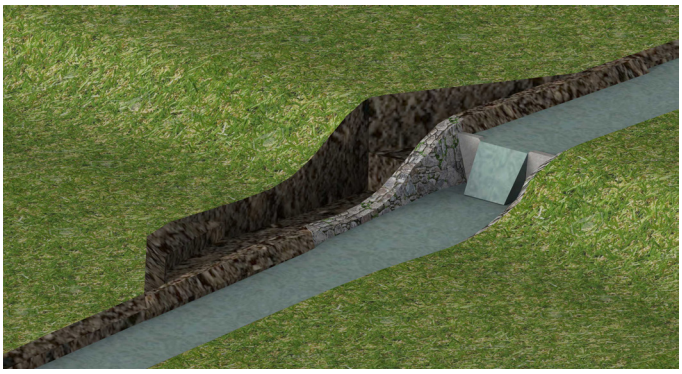
Installation

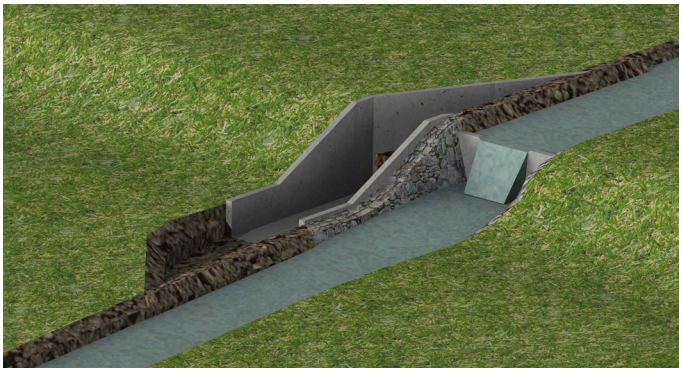
1) Simple excavation works
2) Building the foundation and securing the walls (depending on location circumstances)
3) Installing and anchorring the doro-C (no specialists needed)
4) Connecting doro-C to the grid or load-> Starting the hydropower plant and produce electricity



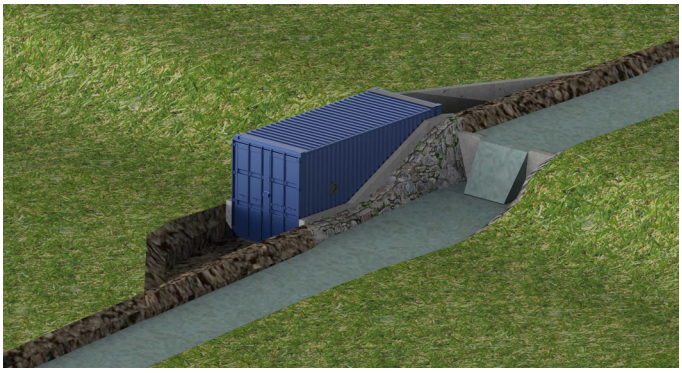
Starting situation: Head 0,7 to 1,5 meters



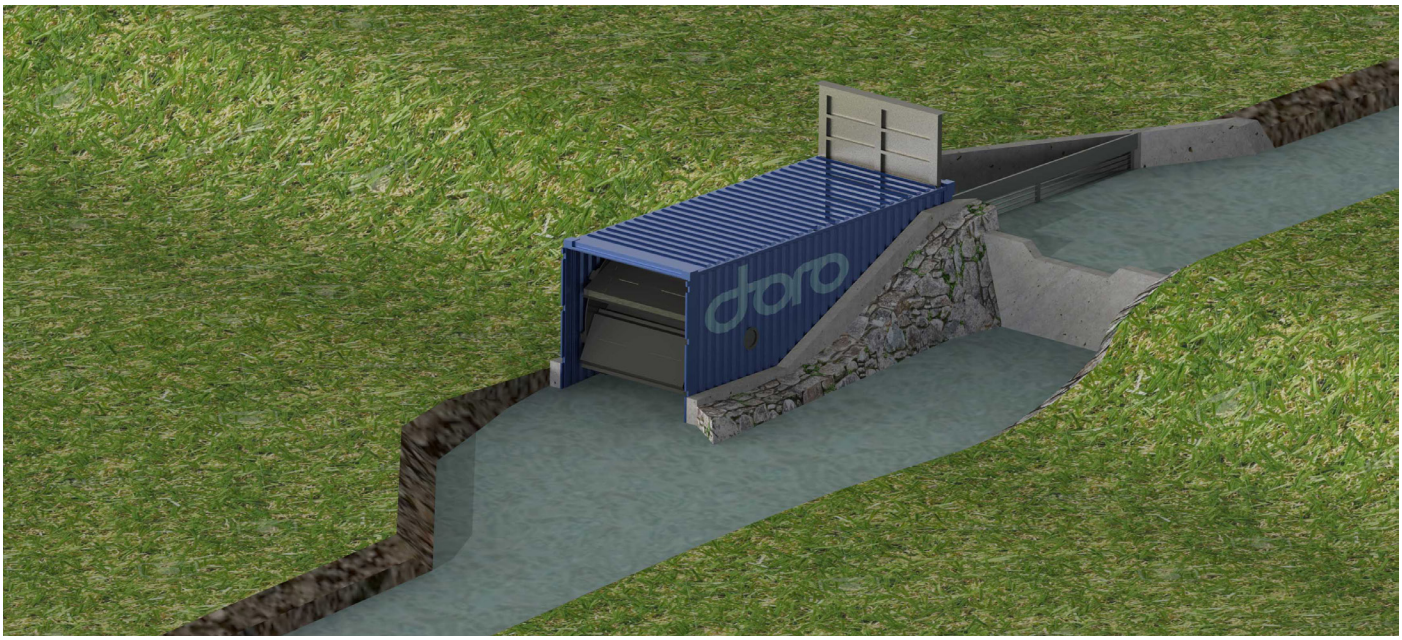
Step 1: Excavation works



Step 2: Foundation, securing the walls



Step 3: Installing the doro-C onto the foundation



Step 4: Connecting doro-C to the grid/load -> Starting operation