

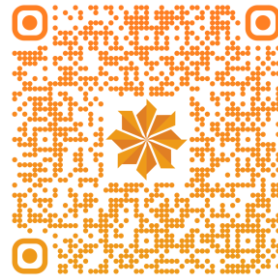
# HYDRO POWER GENERATION TRAINER



## Overview

This option of the Hydro Power Generation Trainer can work in both off-grid and on-grid modes. It consists of a 3-phase synchronous generator moved by a real Pelton turbine. The trainer simulates real water flow using a pump. With the manually controlled valves, it allows to simulate different water flow and head pressure and investigate the generator performance in different conditions. In off-grid mode it allows to investigate the supply of local loads, as well as voltage and frequency regulation. In on-grid mode it allows to implement the synchronization with the mains power grid.

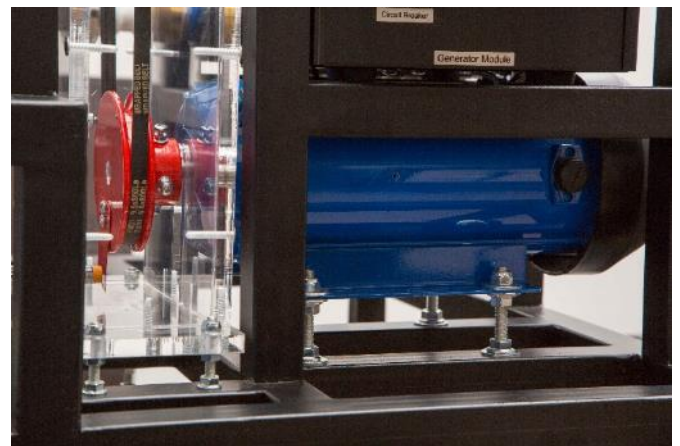
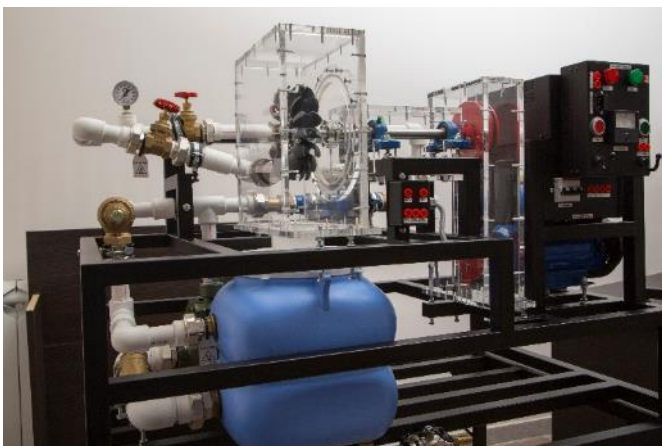
YouTube Link: <https://youtu.be/SVfrU1zqAuA>

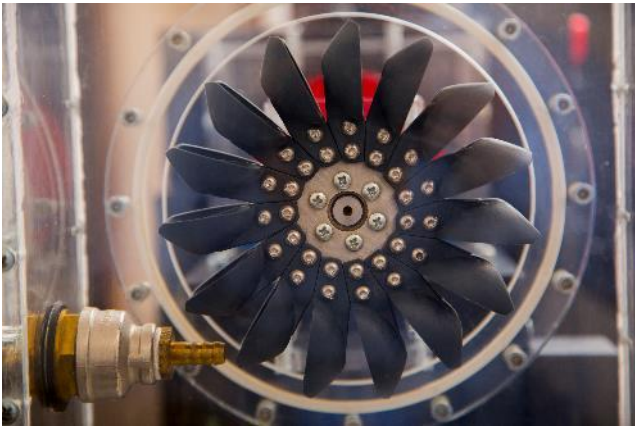


## Topics covered

- ✓ Structure of the Turbine
- ✓ Structure of the Generator
- ✓ Measurement of the Generated Current, Voltage and Power
- ✓ Main Characteristics of the turbine
- ✓ Main Characteristics of the generator
- ✓ Main characteristics of off-grid hydro power plant
- ✓ Main characteristics of on-grid hydro power plant
- ✓ Protection in hydro power plant in case of emergencies

## Hydro Power Generation Trainer Hardware Pictures





## Hydro Power Generation Trainer Software Screenshots

