

# TRADITIONAL & HYDRO POWER GENERATION TRAINER

## Overview

This trainer allows to investigate how the traditional and renewable generations sources work in parallel (synchronously) within a microgrid. Firstly, the Hydro Generation Trainer is synchronized to the traditional one, and vice versa. In both cases the voltage and frequency regulation is implemented. During the parallel operation of two generation sources, the users are able to adjust the power factor to have minimum reactive power generation.

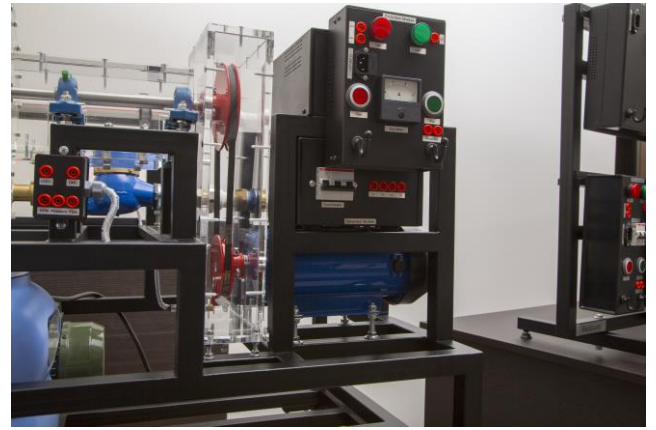
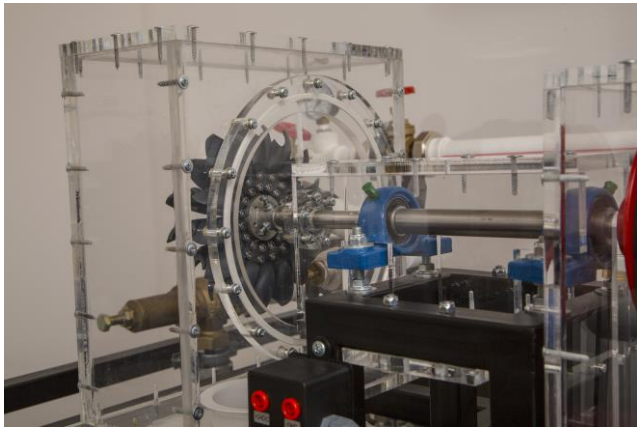
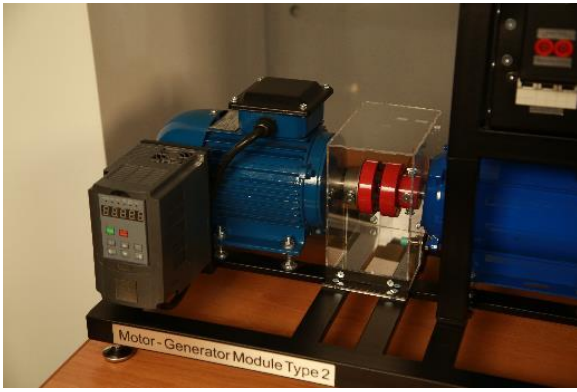
YouTube Link: <https://youtu.be/OnpSBW-9Y6A>



Topics covered:

- ✓ Types of traditional power plants
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- ✓ Energy sources and drive engines of traditional power plants
- ✓ Electric generators of traditional power plants
- ✓ Operation of autonomous traditional power plants
- ✓ Operation of on-grid traditional power plants
- ✓ Protection in traditional power plant in case of emergencies
- ✓ 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

## Traditional Power Generation Trainer Hardware Pictures



## Traditional Power Generation Trainer Software Screenshots

