

GENERAL EXPLANATION

Pelton turbines are a type of turbine often used in dams where high water droplets are present. In these turbines, the speed of the impeller can be changed by adjusting the water flow with the help of the valve. In addition, the efficiency of the water beam can be changed using the deflector. This training set is designed to adopt the basic concepts of pelton turbines.

EXPERIMENTS

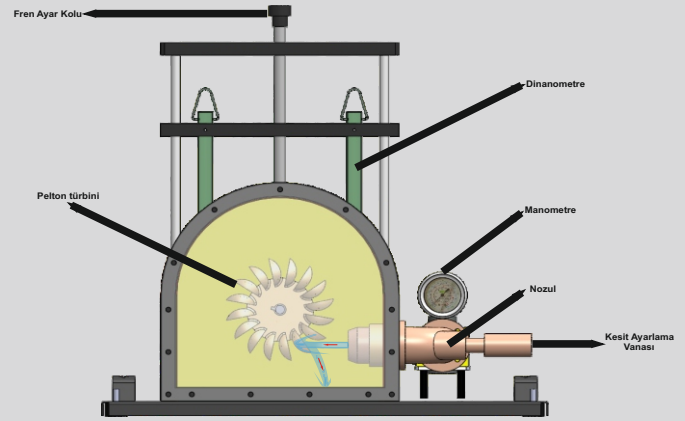
1. Calculation of turbine efficiency at different speeds
2. Determination of flow rate and number of revolutions for maximum efficiency

PACKAGE INCLUDED

Device, device cover, 1 printed experiment report, circuit diagram and product catalog

TECHNICAL SPECIFICATION

The main parts of the Pelton turbines come from the spouting nozzle and the circle-shaped impeller. The nozzle delivers the water from the liquid pipe to the impeller's lobes like a fixed sprinkler. There is a needle in the nozzle that adjusts by moving in the axial direction. By moving the needle forward and backward, the flow is reduced and multiplied and the turbine power is adjusted according to the energy taken. At the same time, this needle can completely close the water. The needle needs to be moved slowly to avoid dangerous water bumps in the rough pipe. Water rushes out of the circular tip of your nozzle and strikes the impeller shovels. The alternator connected to the wheel generates electricity by turning the impeller.



TECHNICAL DETAILS

- Pelton Turbine
- Pressure Manometer
- Ball valve
- Turbine output power 50 W
- Turbine wheel diameter 150 mm