



Product Code . LSK-FM-10433

Pelton Turbine

Description

An adjustable spear valve directs a jet of water through a nozzle to the buckets of the Pelton wheel to make it turn. Manual adjustment of the spear valve controls the water jet from the nozzle.

Shows students how an impulse (Pelton) turbine works and tests its performance. The Pelton wheel is an important and efficient fluid power machine, used in many applications.

The turbine includes all pipes and fittings to connect it to Lsskenya Digital Hydraulic Bench. The hydraulic bench also measures flow rate. The Optical Tachometer (OT1, available separately) can measure the speed of rotation of the turbine.

A simple mechanical brake and spring balance assembly attached to the shaft of the Pelton wheel applies a variable mechanical load (torque). Students use this with the speed (from the optional tachometer) to find power absorbed by the turbine. A gauge measures inlet pressure.

Students adjust the spear valve and measure inlet pressure, flow rate and torque (and speed with the optional tachometer). They plot these values to find the turbine performance.

The unit consists of a Pelton wheel mounted in a corrosion-resistant enclosure. A transparent front panel allows students to see the turbine working. An optional Stroboscope can 'freeze' the image of the turbine to help students better understand how it works.