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**Product Name :**

Pelton Turbine Test Rig

**Product Code :**

SLE/MCE/50



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## Description :

**Pelton Turbine Test Rig** (Product Code: SLE/MCE/50) is an impulse turbine test unit used to measure torque, speed and power of a Pelton wheel at different nozzle settings in hydraulic machines laboratories. A 123 mm wheel with 16 buckets turns under a transparent cover, driven by a needle-controlled nozzle and loaded by a band brake read on spring balances. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer of fluid mechanics lab equipment in India, at its own factory in Ambala.

### Specifications

| Parameter | Detail |
|---|---|
| Turbine type | Pelton (impulse) wheel; jet deflected by approx. 180° in the buckets |
| Pelton wheel diameter | 123 mm |
| Number of buckets | 16 |
| Nozzle | Adjustable nozzle needle to change the cross-section and flow rate |
| Brake power | 10 W |
| Torque measurement | Band brake with spring balances; force balance range 0 to 20 N x 0.2 N |
| Speed | 0 to 2000 rpm, non-contact speed sensor |
| Pressure gauge range | 0 to 25 m $H_2O$ |
| Viewing | Transparent cover over the wheel and nozzle |
| Power required | 230 V, 50 Hz, 1 phase |
| Dimensions | 1000 x 800 x 1200 mm |
| Weight | Approx. 90 kg |
| Product code | SLE/MCE/50 |
| Manufacturer | Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM |
| Country of origin | India (made in Ambala, Haryana) |

### What Is the Pelton Turbine Test Rig Used For?

Pelton wheels are chosen for high-head, low-flow hydro sites, and their operating principle is easy to see on this rig. The water jet is accelerated in the nozzle, strikes the buckets tangentially and is turned back by about 180°, handing its momentum to the wheel. Through the transparent cover students can watch the jet split in each bucket as the needle opens or closes the nozzle.

A standard test holds the nozzle setting constant while the band brake is tightened step by step; the s
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