



Email : sales@laboratoryinstrumentindia.com

**Product Name :**  
Experiments With An Action Turbine

**Product Code :**  
LBNY-0005-10300086



#### **Description :**

The axially discharged water from the turbine impeller can be observed. The number of active nozzles can be adjusted by valves. The eddy current brake generates a defined load. The experimental unit is placed upon the base unit. The two units together provide the basic experiments to get to know the operating behaviour and the most important characteristic variables of action turbines. Action turbines operate according to the principle of equal pressure. The water jets are deflected in the turbine impeller and put it in motion. The eddy current brake is specially developed by. The torque delivered by the turbine is determined via an electronic force sensor. The speed is measured with an optical speed sensor. The static pressures at the inlet and at the outlet of the impeller are equal. The water jets are discharged with high velocity from four nozzles of the distributor.

#### **Technical Specification :**

Functioning and operating behaviour of an action turbine  
Transparent housing for observing the turbine impeller  
Force sensor to determine the torque on turbine shaft  
Optical speed sensor for measuring the turbine speed  
Turbine to place upon the base unit  
Distributor with 4 nozzles, active nozzles adjustable by valves  
Constant pressure of the turbine represents in practice the height difference and is adjusted via  
Turbine load using the wear-free and adjustable eddy current brake.

#### **Technical Data:**

Turbine  
Rotor diameter: 50mm

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Power output: approx. 28W at 3.600min<sup>-1</sup>

Measuring ranges

Torque: 0..0,5Nm

Speed: 0...9.000min<sup>-1</sup>

Dimensions and Weight:

LxWxH: 420x320x180mm

Weight: approx. 7kg.



**Laboratory Instrument India**