SCIENTICO INDIA
Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Kaplan Turbine Apparatus | FluidoSurgeX 208

Category: Fluid Mechanics · **Order Code:** FLUIDOSURGEX 208 · **Country of Origin:** India

Product Overview

A CE-certified turbine test rig for performance characteristic studies, efficiency curves, and energy conversion analysis, manufactured by Scientico India to ISO 9001:2015 standards. Supplied with calibration certificate, operation manual, and complete export documentation. Designed for Fluid Mechanics laboratories in engineering colleges and technical institutions.

View this product online: https://scienticoindia.com/product/kaplan-turbine-apparatus-fluidosurgex-208/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Parameter	Specification
Turbine Type	Kaplan reaction turbine
Maximum Output	10 W
Maximum Speed	1800 rpm
Impeller	4 fixed blades
Guide Vanes	6 adjustable
Guide Vane Adjustment Range	-15° to +45°
Turbine External Diameter	40 to 50 mm
Turbine Internal Diameter	20 to 25 mm
Loading Method	Air-cooled band brake
Speed Measurement	Non-contact tachometer
Pressure Measurement Range	0 to 1 bar
Torque Measurement Range	0 to 10 Nm
Spring Balance Capacity	1 kg
Spring Balance Least Count	10 g

Key Features

Key Features-

- Demonstration of Kaplan turbine operating principles
- Axial flow reaction turbine suitable for low head applications
- Adjustable guide vanes for changing angle of incidence
- Flow rate control through hydraulic bench throttle valve
- Band brake loading for power and efficiency studies
- Non-contact speed measurement at turbine shaft
- Suitable for controlled laboratory experimentation

Applications-

- Fluid mechanics laboratory training
- Study of hydraulic turbines
- Power output and efficiency analysis
- Investigation of guide vane influence on turbine performance
- Educational demonstrations of energy conversion in turbomachinery

Construction & Design Details-

The apparatus consists of a compact Kaplan turbine with fixed impeller blades and adjustable guide vanes. The turbine is connected to a hydraulic bench operating in a closed water circuit. Turbine loading is achieved using an air-cooled band brake fitted with a dynamometer for torque measurement. Inlet pressure is measured using a manometer, while rotational speed is captured using a non-contact tachometer.

Experiments-

- Determination of hydraulic and mechanical power output curves at different speeds
- Determination of turbine head
- Calculation of turbine efficiency
- Study of the effect of guide vane position on power output
- Study of the effect of guide vane position on efficiency

Required for Operation-

- Hydraulic bench with closed water circuit or suitable water supply
- Drain connection

Standard Scope of Delivery-

- 1 experimental module
- 2 spring balances
- 1 non-contact tachometer
- 1 instruction manual

Export & Supply Capability-

SCIENTICO manufactures the Kaplan Turbine Apparatus FluidoSurgeX 208 for supply to engineering institutes, technical universities, and training laboratories. The unit is suitable for domestic and international shipment. Export packing and documentation are provided according to customer and destination requirements.

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q1. What type of turbine is used in FluidoSurgeX 208?
It is a Kaplan type reaction turbine with axial flow.

Q2. How is the water flow rate controlled?
The flow rate is adjusted using the throttle valve on the hydraulic bench.

Q3. How is turbine loading applied?
The turbine is loaded using an air-cooled band brake.

Q4. What parameters can be measured during experiments?
Speed, torque, inlet pressure, head, power output, and efficiency can be determined.

Q5. Is a hydraulic bench included with the apparatus?
No. A hydraulic bench or suitable water supply is required for operation.

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