

TURBINE FRANCIS



Experimental capabilities

- In conjunction with UTL 015 or UTL 050 supply unit :
- Design and function of a Francis Turbine
- Determination of torque, power and efficiency
- Graphical representation of characteristic curves for torque, power and efficiency

Operating principle

The TVF 020 bench allows the study of a hydraulic turbine of Francis type.

The connection UTL 015 simulates the water reserve and a pump simulates the height of the fall.

The user will adjust the different power supply parameters of the turbine (pressure, flow rate and opening the profile blades of wing of aircraft in the distributor). It will then use the brake so as to create a load on the shaft of the turbine.

The goal is to vary the rotational speed and to be able to raise the different parameters according to this latter.

The bench is fully instrumented to characterize the system.

The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises.

The manufacture of this equipment complies with the European standard for machinery manufacturing.

This equipment can be used alone or with other compatible equipment from our range (see last section of this document).

Illustrations



Technical details

1. Guide vanes

6 off, fully adjustable from fully closed to fully open

2. Impeller

80 mm diameter, 10 blades

3. Turbine Speed

1100 rev.min⁻¹

4. Turbine power

3 Watts

Services required

- Water supply : 25 L/min – 3 bars or supply by bench UTL 015 or UTL 050 in option (not included)
- Water drain : on the floor
- Dimensions: (LxWxH mm): 400 x 360 x 700
- weight (Kg): 11

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

Documentation

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Certificate of conformity CE

Recommended equipment

- Water supply unit
- Water supply unit
- Ref : UTL 050
- Ref : UTL 050