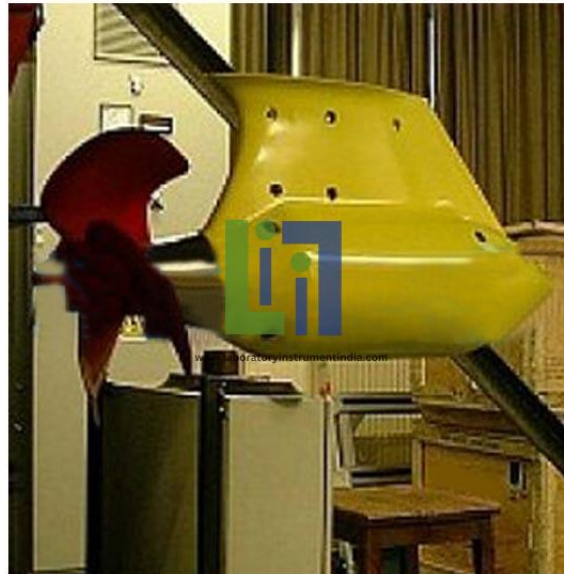




Email : sales@laboratoryinstrumentindia.com

**Product Name :**  
Open Water Podded Propeller Dynamometer

**Product Code :**  
LBNY-0005-1970002



#### **Description :**

The necessity to support the international ship model testing community with the provision of a Podded Propeller Dynamometer has therefore become imperative the need to carry out tests to establish the hydrodynamic and operational advantages of podded drives over conventional propulsion systems is a worldwide requirement and urgent. A variety of podded propulsion drive systems are increasingly being introduced into current and future generation designs of cruise liners, ferries, vessels operating in ice conditions, shuttle tankers and specialist multi-hull vessels.

#### **Features:**

The use of a single propeller fitted at either end of the pod or a dual propeller combination rotating in the same direction. The standard gearbox suitable for a Maximum Torque for two propellers 15Nm at each shaft with a combined torque of 30Nm or a single propeller with a max torque of 30Nm  
Torque and thrust strain bridge sensor telemetry units available for each propeller (single supplied as standard);  
A compact podded propeller dynamometer with driveshaft, bevel gears and two output shafts to which propellers can be fitted if required. Please note the propeller shafts can be designed to suit customers requirements, however in view of the high forces generated within the unit, there is a requirement to use low-mass propellers and not to exceed recommended limits;  
Height and Angle Mechanisms: these can be supplied with frame suitable for use in a towing carriage or a mounting system designed to fit the equipment for use with in a cavitation tunnel allowing adjustment in height/depth as well as adjustment in Roll, Yaw and Pitch Angles.  
Drive motor and control with speed output signal for data acquisition if required  
Combined with an three component balance facilitating measurement of forces drag/unit thrust  $F_x$  or lateral force  $F_y$  as well as Yaw moment  $M_z$  in open water testing  
Speed Display Rack: this can be used either with the inline encoder or drive output to display the propeller speed

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or drive speed. Please note that as the uses a 2:1 gearbox.

**Technical Specification :**

Maximum Continuous Speed (at the propeller): 2000rpm  
Gear Box ratio: 2:1  
Rated Max Thrust:  $\pm 600$  N  
Type of load sensors: Full bridge strain gauge  
Rated Max Torque:  $\pm 30$  Nm Rated  
Approximate pod diameter: 50 mm (Excluding Outrigger)  
Approximate pod length: 288 mm (See Illustration Below)  
Maximum mass of propeller: 2500g.



**Laboratory Instrument India**