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**Product Name :**  
Hydrodynamic Bearing Apparatus

**Product Code :**  
LBNY-0005-10100045



**Description :**

The experimental capability ranges from the measurement of friction torque under load, to determine the pressure distribution in a journal bearing, to plot a locus curve of a journal and to determine the bearing attitude for different conditions of load and speed. The behaviour of a classical journal bearing with hydrodynamic lubrication can be investigated with the apparatus. The radial load of max. 500N is adjusted manually with a hand wheel. The drive is an asynchronous motor with frequency converter. Five different journals are used to examine bearing clearance. X and Y positions are measured using inductive displacement sensors. All variables (speed, load, friction torque, oil supply pressure, oil peak pressure, oil temperature, X-displacement, Y-displacement) are indicated on 4-digit displays. The friction torque is measured by means of a lever arm equipped with an electronic force sensor.

**Technical Specification :**

Determination of friction torque with strain gauge force sensor and lever arm  
Electronic sensors and digital displays for: speed, oil temperature, oil pressure (supply and peak), friction torque, displacement in X- and Y-direction  
Journal of a shaft: nominal diameter 50mm, width of bearing shell: 20mm  
Mobile unit to investigate friction in a hydrodynamically lubricated journal bearing  
Max. radial bearing load: 500N  
Drive motor: 0.37kW, max. 1500rpm.

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