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Product Name :
Gear Efficiency Apparatus

Product Code :
LBNY-0005-14000016



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Description :

The Gear Efficiency Apparatus has a gearbox which incorporates both spur and worm gears for which the setups can be easily switched between. The input and output power of the Gear Efficiency Apparatus is calculated for determining the Gear Efficiency of two different gear configurations. Sensors for speed and force are located on the motor module (input) and the brake module (output). The motor speed input can be controlled as well as a braking force or load applied to the output shaft via a braking module.

By comparing the actual input and output readings to that of the calculated output values we can affectively work out the losses in the system and the efficiency of the respective gear configurations. By taking the input and output force (N) readings we can then calculate the torque (Nm) in the shafts as well as go on to calculate the power (Nm/s).

Experimental Capabilities:

Measurement of mechanical efficiency of gears
Familiarity of industrial gearboxes and their uses and application benefits.
Braking and friction
Gear ratios and theory
Comparison of input and output power
Efficiencies of spur and worm gear configurations
Torque measurement
Motor performance under loading.

Technical Specification :

Digital display for force and speed readings

Speed control
Load cell for motor reaction force
Load cell for braking force
Input and Output speed sensors
Dimensions: approx. 900(L) x 550(W) x 300(H)mm
Weight: approx. 45 Kg
Worm and spur gearbox
0.3000rpm motor.



Laboratory Instrument India