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Product Name : Comprehensive Geared System	**Product Code :** LBNY-0005-13000022

Description :

The first shafts has a cable drum for weight hanger. The apparatus has a transparent cover with interlocks for safety protection. The unit is steel frame with adjustable footings. The second shaft has an interchangeable inertia mass. A speed sensor monitors the mass speed. A motor dynamometer measures the gear system input power. This motor dynamometer drives the first shaft via an electric clutch. Speed is controlled by an inverter. The Comprehensive Geared System is used for studying the acceleration of a geared system as well as geared system efficiency under different gear ratios. For a study of acceleration of the geared system, a weight hanger provides torque on the cable drum and speed sensor can measure inertia mass velocity and acceleration. The Comprehensive Geared System consists of three shafts, two stage spur gear unit with two fixed gear and two sliding gear sets. All shafts rest on ball bearings on a steel frame. A mechanical brake dynamometer is attached to the third shaft for measurement of the gear system output power.

Experiments:
Input power, output power, and efficiency.
Effect of speed and load on efficiency.
Inertia of a mass and of a geared system.

Technical Specification :

Weight hanger and weights : 1 lot.
Inertia masses : 2.
Gear : Spur gear module 2.
Transmission ratio alternatives : 3.
Speed control : 0.75 kW inverter for controlling motor speed.

Power supply : 220 V, 1 Ph, 50 Hz.
Power measurement
a. Speeds : Digital display for input and output shafts.
b. Torques : Digital display for input and output shafts.

Laboratory Instrument India