

Product Name :
Dynamic Behaviour Of Multistage Planetary Gears

Product Code :
TN622



Description :

Dynamic Behaviour Of Multistage Planetary Gears

Technical Specification :

Dynamic Behaviour Of Multistage Planetary Gears

The unit is perform the following experiments and investigations:

Learning Objectives / Experiments:

- Determine the transmission ratio for a locked gear
- Measure transmitted forces for a locked gear
- Gear acceleration under constant driving torque
- Influence of the transmission ratio
- Determine reduced mass moment of inertia
- Conversion of potential energy into kinetic energy
- Determine friction
- Determine gear efficiency

Specification:

- Investigation of the dynamic behaviour of a 2-stage planetary gear
- Three planet gears per stage
- Four different transmission ratios possible
- Gear is accelerated via cable drum and variable set of weights
- Weight raised by hand crank; ratchet prevents accidental release
- Clamping roller freewheel enables free further rotation after the weight has been released

Shock absorber for weight
Transparent protective cover
Force measurement on different gear stages via 3 bending bars, display via dial gauges
Inductive speed sensors
Software for data acquisition via usb under windows 7, 8.1, 10
Including PC1 Computer-System with 21" TFT-Monitor Win 10 engl.

Technical Data:

2-stage planetary gear
Module: 2mm
Sun gears: 24-tooth, d-pitch circle: 48mm
Planet gears: 24-tooth, d-pitch circle: 48mm
Ring gears: 72-tooth, d-pitch circle: 144mm
Drive
Set of weights: 5...50kg
Max. Potential energy: 245,3Nm
Load at standstill
Weight forces: 5...70N
Measuring ranges
Speed: 0...2000rpm
230V, 50Hz, 1 phase
230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase
Dimensions and Weight
Length x Width x Height: 950x600x1700mm
Weight: 150kg

Naugralabequipments

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