

# GL 300.05

## Cutaway model: planetary gear



### Learning objectives/experiments

- principle of operation and design of a planetary gear

### Specification

- [1] hand-powered cutaway model for demonstrating the function of a planetary gear
- [2] industrial original component, fully functional cutaway model

### Technical data

Transmission ratio

- sun wheel
  - ▶ number of teeth:  $z=24$
  - ▶ real pitch module:  $m=1\text{ mm}$
- planet gears
  - ▶ quantity: 3
  - ▶ number of teeth:  $z=36$
  - ▶ real pitch module:  $m=1\text{ mm}$
- hollow wheel
  - ▶ number of teeth:  $z=96$
  - ▶ real pitch module:  $m=1\text{ mm}$
- transmission ratio:  $i=5$

Nominal torque at output

- $160\text{ Nm}$  at  $3000\text{ min}^{-1}$

LxWxH:  $350 \times 300 \times 160\text{ mm}$

Weight: approx.  $5\text{ kg}$

### Scope of delivery

- 1 cutaway model
- 1 description
- 1 sectional view

### Description

#### ■ demonstration of complex machine elements and demonstration of their principle of operation

Using cutaway models it is possible to clearly demonstrate the operational principles of complex machine elements such as a multi-disc clutch, various gear units or a pedestal bearing. The GL 300.01 to GL 300.12 cutaway models form a meaningful addition to the assembly kits, models and model kits for the engineering drawing discipline.

In order to be able to use the cutaway models in engineering teaching, each model comes with a standards-compliant and practical drawing and a technical description.

Problems of engineering drawing, fasteners and machine parts or production and testing technology can be studied in a clear and practical manner using the cutaway models.

The cutaway models represent original components in which the active parts are clearly visible to the user while fully maintaining their mechanical functionality. Each of the cutaway models is securely mounted on a base plate, which also has handles to allow them to be carried. They are powered by hand.

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Optional accessories

MT 122

Assembly exercise: planetary gear