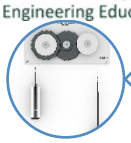


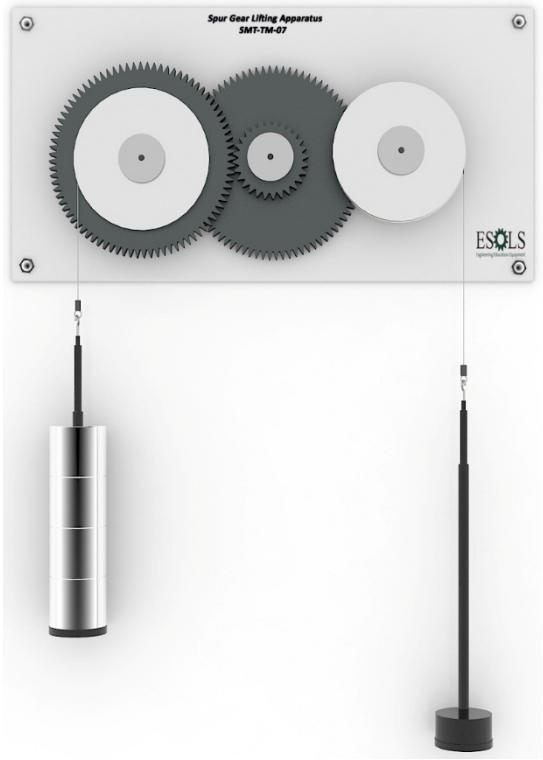
Spur Gear Lifting Apparatus (SMT-TM-07)

Gears and gear drives are machine elements that are classified as transmission or conversion elements. Gears transfer the rotational motion from one shaft to another by means of a positive connection. In a spur gear, the gears are arranged on parallel axles. This type of gear is characterised by its relatively simple construction, since only a few moving parts are used and the external teeth gears are simple to manufacture. Spur gears are robust and highly efficient because of their direct, purely mechanical transmission.

TECHNICAL SPECIFICATIONS

Specifications:

- Function and design of gear drives.
- 4 Plastic gear wheels.
- 2 anodised aluminium pulleys.
- Ball-bearing-mounted gears and pulleys.
- Anodised aluminium base plate.



Technical Data:

- 4 Gear wheels:
  - 2x Ø=126mm, 84 teeth.
  - 2x Ø=42mm, 28 teeth.
  - Module: m=2mm.
- Pulleys effective radius: 35mm.
- Weights:
  - 2x 1N (hanger) • 2x 0.25N.
  - 1x 0.5N.
  - 2x 1N.
  - 2x 2N.
  - 2x 2.5N.
- LxWxH: 350x150x100mm.
- Weight: approx. 6kg.

Experimental Data:

- Development of the main variables and relationships in a straight-toothed spur gear
- Velocity ratios in spur gears
- Gear with intermediate wheel or two-stage gear
- Influence of gear ratio on friction
- Determine the efficiency

Web: http://www.esolsengineering.com, Email: esolsengineering@gmail.com