

TZ 200.07

Assembly exercise: lever shear



The illustration shows the device and the GUNT Media Center on a tablet (not included).

Description

- functional lever shear as a practice model
- introduction to engineering drawing
- simple assembly sequences
- part of GUNT DigiSkills learning projects
- multimedia instructional materials online in GUNT Media Center: 3D PDF, DXF files, STEP files, video

The ability to read and understand drawings, graphics and schematics is a fundamental element in the development of professional competence in all engineering disciplines. Linking engineering communication to the associated technical operations such as assembly structure, work plans and manufacturing is just as important.

The GUNT DigiSkills 1 learning project includes various model sets, from the simple geometric model to models with real function. With the model of the lever shear in TZ 200.07, based on a concrete component and real functions, the topics of assembly planning and assembly execution as well as measuring exercises are handled in addition to the primary learning area "engineering drawing".

The assembly kit contains all individual parts to be able to assemble a functional lever shear. All production parts are precisely manufactured on CNC machines. They are made of original materials with tolerances and surfaces customary in mechanical engineering. The surfaces of the steel parts are burnished so that corrosion is avoided.

The parts are grouped in a storage system so that individual assembly sequences are clearly displayed. A transparent plate represents a structural grid with indications of the assembly process. The graphic symbolizes standard and production parts and shows fixed and movable connections differently.

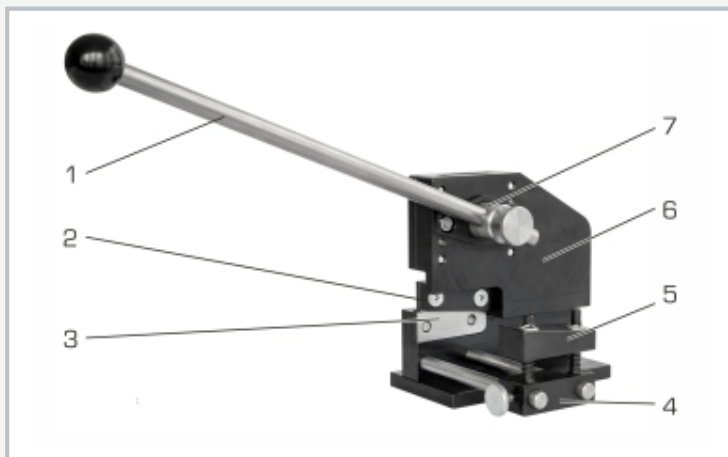
The contemporary multimedia instructional materials are available online in the GUNT Media Center. The core element is a complete set of drawings in file form (DXF, STEP, PDF) with list of parts, single-part drawings, exploded views, assembly drawings and 3D drawings. All drawings are to standard and are dimensioned in accordance with production requirements. A selection of different worksheets with solutions completes the instructional material. The assembly video is also a useful feature.

Learning objectives/experiments

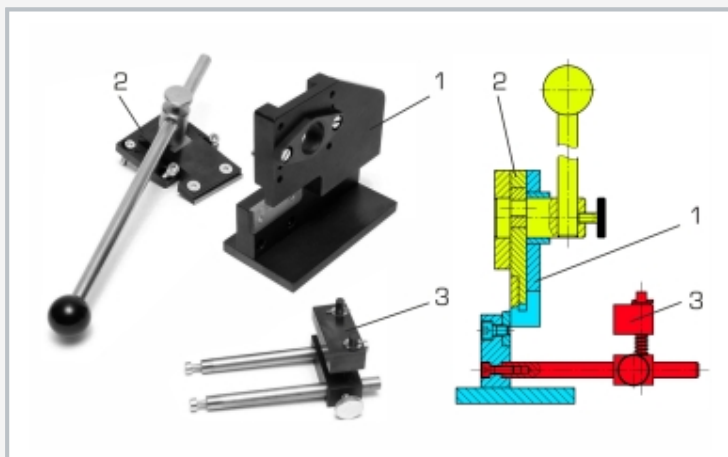
- engineering drawing
- familiarisation with three-view display
 - ▶ production-oriented and standardised representation of parts
 - ▶ surface finish and tolerance specifications
 - ▶ overview drawing
 - ▶ parts list
 - ▶ standard parts
 - ▶ 3D views
 - ▶ material specifications
- technology
 - ▶ assembly and disassembly
 - ▶ planning an assembly sequence
 - ▶ functions
 - ▶ material selection
 - ▶ manufacturing methods
- measurement exercises: length measurements
- develop digital skills
 - ▶ retrieve information from digital networks and obtaining it from digital networks
 - ▶ use digital learning media, get to know Web Based Training (WBT) and use them
 - ▶ use assistance, simulation, diagnosis or visualisation systems, e.g. QR codes, CAD viewer tool, video

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Assembly exercise: lever shear



1 lever rod with ball head, 2 shear body with top blade, 3 bottom blade, 4 guide, 5 stop, 6 main body, 7 eccentric shaft



Functional groups of the lever shear
1 main body, 2 shear body, 3 stop



Screenshot of the GUNT Media Center: assembly video

Specification

- [1] assembly kit of a functional lever shear with eccentric operation
- [2] transparent plate with graphic representation of the assembly structure, standard and production parts as well as fixed and movable connections
- [3] all components made from steel, precision-manufactured, with gunmetal surface finish
- [4] individual components clearly arranged in the practical storage system
- [5] multiple storage systems can be stacked on top of each other
- [6] instructional material incorporates action-oriented and interdisciplinary forms of teaching
- [7] multimedia instructional materials: PDF, CAD files, STEP files, videos
- [8] online access to the GUNT Media Center
- [9] part of the GUNT DigiSkills: vertical teaching of digital skills in complex learning projects

Technical data

LxWxH: 600x400x100mm (storage system)
Weight: approx. 3kg

Scope of delivery

- 1 lever shear as assembly kit
- 1 set of assembly/ disassembly tools
- 1 online access to the GUNT Media Center with instructional material, complete set of drawings included
- 1 storage system with foam inlay