

2 Machine tools and power tools

2.1 Machine tools

WORD LIST

large-scale manufacturing
Massenfertigung
to smooth glätten

R a) Read the following text about machine tools. Name the most important machine tools for cutting processes.

- . For cutting processes the centre lathe, the milling machine and the grinding machine are some of the most important machine tools.
- . CNC (Computerized Numerical Control) machines are used in industry for highly accurate, large-scale manufacturing, whereas conventional machine tools are still used in training centres.
- . The main difference between a conventional centre lathe and a milling machine is the shape of the machined components. Round materials are manufactured on a centre lathe, and flat materials are worked on a milling machine. However, state-of-the-art CNC machine stations can process flat and round components.
- . A grinding machine is used for sharpening tools and smoothing surfaces accurately.

R b) Read the text again. Point out the main differences between the machined components.

2.2 Machine tools and their parts

centre lathe

- a. headstock with gearbox
- b. toolpost
- c. main switch
- d. saddle and cross slide
- e. handwheel control
- f. main spindle with chuck
- g. tool quick exchange
- h. tailstock
- i. machine bed with slide
- j. control rod

