



TEXTBOOK SERIES
FROM EUROPA-LEHRMITTEL
for the metalworking trades

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Mechanical and Metal Trades Handbook

4th English edition

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The content of the chapter "Program structure of CNC machines according to PAL" (page 349 to 368) complies with the publications of the PAL Prüfungs- und Lehrmittelentwicklungsstelle (Institute for the development of training and testing material) of the IHK Region Stuttgart (Chamber of Commerce and Industry of the Stuttgart region).

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All batches of this edition may be used concurrently in the classroom since they are unchanged, except for some corrections to typographical errors and slight changes in standards.

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Preface

The Mechanical and Metal Trades Handbook is well-suited for shop reference, tooling, machine building, maintenance and as a general book of knowledge. It is also useful for educational purposes, especially in practical work or curricula and continuing education programs.

Target Groups

- Industrial and trade mechanics
- Technical product designers
- Apprentices in above trade areas
- Practitioners in trades and industry
- Mechanical engineering students

Notes for the user

The contents of this book include tables and formulas in seven chapters as well as a table of contents, a subject index, a standard index and an international material comparison chart.

For a better overview, each of the seven chapters is preceded by an additional one-page **table of contents**.

The **tables** contain the most important guidelines, designs, types, dimensions and standard values for their respective subject areas.

Units are not specified in the legends for the **formulas** if several units are possible. However, the calculation examples for each formula use those units normally applied in practice.

Changes in the 4th edition

The standards in this edition are **current as of January 2017**. Due to new standards and technical developments, the following contents have been updated, expanded or newly added:

- Quality management and environmental management according to the latest standard. Elimination of general terms from quality management.
- Introduction to "Geometrical product specification (GPS)" for technical communication principles.
- Additional tools and partially updated standard values for machining operations.
- Additions in cost accounting.
- Representation of structuring principles and reference designation in schematic circuit diagrams according to ISO 1219 and DIN EN 81346.

Authors and publishers continue to be grateful to all users of the table handbook for notes and suggestions for improvement addressed to lektorat@europa-lehrmittel.de.

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