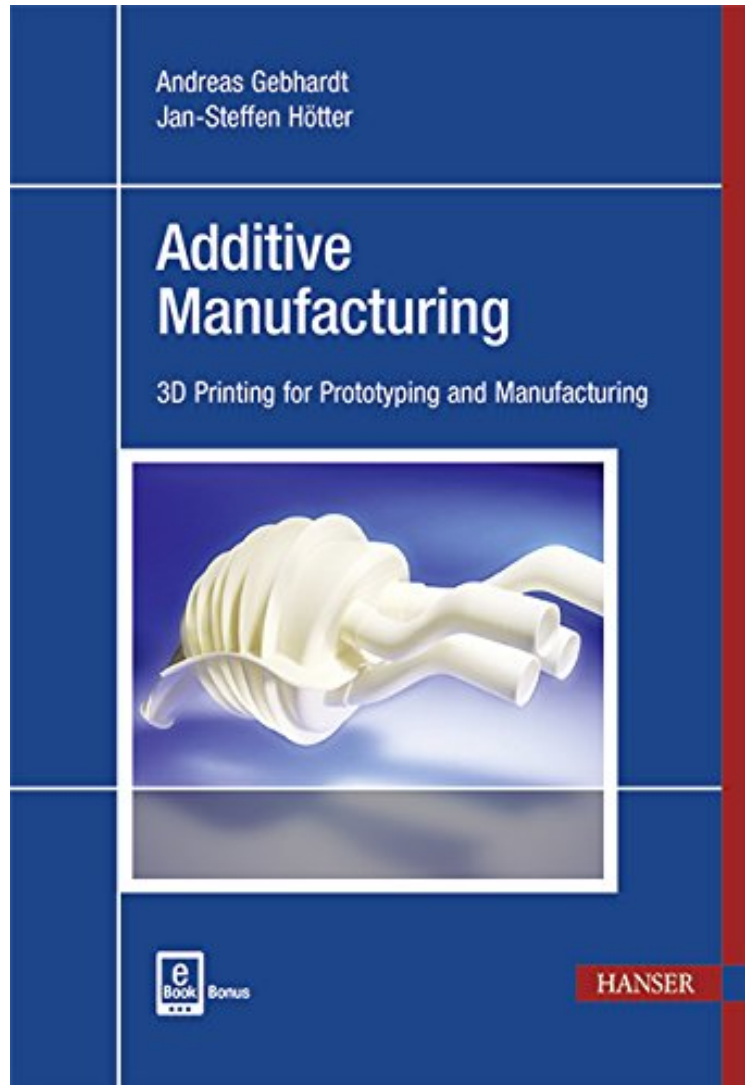


# Additive Manufacturing: 3D Printing for Prototyping and Manufacturing

Andreas Gebhardt

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**Andreas Gebhardt : Additive Manufacturing: 3D Printing for Prototyping and Manufacturing** before purchasing it in order to gauge whether or not it would be worth my time, and all praised Additive Manufacturing: 3D Printing for Prototyping and Manufacturing:

The use of additive manufacturing for the direct production of finished products is becoming increasingly important.

The method not only reduces the demands on industrial infrastructure, but also opens up new perspectives in terms of decentralized production and customer inclusive individualized production (customization, cyberproduction). Oriented towards the practitioner, in this book the basics of additive manufacturing are presented and the properties and special aspects of industrially available machines are discussed. From the generation of data to the forming method, the complete process chain is shown in a practical light. In particular, the following additive manufacturing technologies are discussed: polymerization, sintering and melting, layer laminate method, extrusion, and 3D printing. Applications for the production of models and prototypes (rapid prototyping), tools, tool inserts, and forms (rapid tooling) as well as end products (rapid manufacturing) are covered in detailed chapters with examples. Questions of efficiency are discussed from a strategic point of view, and also from an operational perspective.

About the Author Dr. Andreas Gebhardt, born 1953, graduated in mechanical engineering from the RWTH Aachen, Germany, and received his doctorate in 1986. He is managing director of CP (Centrum für Prototypenbau GmbH), Erkelenz, Germany. Since 2000, he has been professor of high-performance processing in manufacturing engineering and rapid prototyping at the FH (University of Applied Sciences) Aachen. He is also guest professor at the City University, New York.