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Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Part A Fundamentals of Mechanical Engineering -- Part B Applications in Mechanical Engineering -- Part C Complementary Material for Mechanical Engineers -- About the Authors.-Subject Index.
Sommario/riassunto	Mechanical Engineering is a professional engineering discipline which involves the application of principles of physics, design, manufacturing

and maintenance of mechanical systems. It requires a solid understanding of the key concepts including mechanics, kinematics, thermodynamics and energy. Mechanical engineers use these principles and others in the design and analysis of automobiles, aircrafts, heating and cooling systems, industrial equipment and machinery. In addition to these main areas, specialized fields are necessary to prepare future engineers for their positions in industry, such as mechatronics and robotics, transportation and logistics, fuel technology, automotive engineering, biomechanics, vibration, optics and others. Accordingly, the Springer Handbook of Mechanical Engineering devotes its contents to all areas of interest for the practicing engineer as well as for the student at various levels and educational institutions. Authors from all over the world have contributed with their expertise and support the globally working engineer in finding a solution for today's mechanical engineering problems. Each subject is discussed in detail and supported by numerous figures and tables. DIN standards are retained throughout and ISO equivalents are given where possible. The text offers a concise but detailed and authoritative treatment of the topics with full references. Key Topics Engineering Mathematics Mechanics Materials Science and Tribology Thermodynamics Design of Machine Elements Manufacturing Engineering Measuring and Quality Control Engineering Design Pressure Vessels and Heat Exchangers Turbomachinery Transportation Systems Construction and Earth Moving Equipment Power Generation Electrical Engineering Enterprise Organization and Operation Features All mechanical engineering disciplines Over 1700 comprehensive illustrations and tables Exhaustive up-to-date references to approved data Fully searchable DVD for quick access to data A resource for higher-level students Written for every-day use by the globally working engineer.
