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Titolo	Pohl's Introduction to Physics : Volume 1: Mechanics, Acoustics and Thermodynamics / / edited by Klaus Lüders, Robert O. Pohl
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ISBN	3-319-40046-0
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XXVII, 525 p. 509 illus.)
Disciplina	531
Soggetti	Mechanics Acoustics Thermodynamics Classical Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	A. Mechanics -- Introduction; Distance and Time Measurements -- The Description of Motion: Kinematics -- Fundamentals of Dynamics -- Applications of Newton's Equation -- Three useful concepts: Work, Energy, and Momentum -- Rotational Motion of Rigid Bodies -- Accelerated Frames of Reference -- Some Properties of Solids -- Liquids and Gases at Rest -- Motions in Liquids and Gases -- B. Vibrations and Waves -- Vibrations and Acoustics -- Travelling Waves and Radiation -- C. Thermodynamics -- Fundamentals -- First Law and the Equation of State of Ideal Gases -- Real gases -- Heat as Random motion -- Transport processes: Diffusion and Heat Conduction -- The State Function entropy, S -- Converting Heat into Work. The Second Law -- Exercise -- Solutions to the Exercises.
Sommario/riassunto	This classic textbook on experimental physics, written by Robert W. Pohl to accompany his famous lecture courses, served generations of physics and other science majors, not only in his native Germany, and was for many years a standard textbook. Pohl's lucid and memorable style and his consistent use of vivid demonstration experiments made his textbooks unique in their time. This completely revised and updated modern edition retains his style and clarity in an up-to-date format. The accompanying videos document the original

demonstrations and add many modern touches, bringing to life the numerous illustrations in the book and providing an instructive and motivating complement to the text. They are linked to the corresponding topics in the text and can be accessed directly online from the e-book version. Volume 1 covers elementary mechanics, acoustics (vibrations and waves) and thermodynamics. The exercises provide an aid to understanding the material as well as complementary information. This book addresses students of physics and of other natural sciences and engineering, but also teachers and lecturers, who will profit from Pohl's many demonstration experiments, and other interested readers who want to gain an understanding of the fundamentals of physics from an experimental viewpoint.

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