



1st ed. 2021, XCV, 273 p. 126 illus., 116 illus. in color.

Printed book

Hardcover

119,99 € | £109.99 | \$149.99

^[1]128,39 € (D) | 131,99 € (A) | CHF 141,50

eBook

96,29 € | £87.50 | \$109.00

^[2]96,29 € (D) | 96,29 € (A) | CHF 113,00

Available from your library or
[springer.com/shop](https://www.springer.com/shop)

MyCopy ^[3]

Printed eBook for just

€ | \$ 24.99

[springer.com/mycopy](https://www.springer.com/mycopy)

[Error\[en_EN | Export.Bookseller. MediumType | SE\]](#)

Raffaele Pisano, Jennifer Coopersmith, Murray Peake

Essay on Machines in General (1786)

Text, Translations and Commentaries. Lazare Carnot's Mechanics - Volume 1

Series: Logic, Epistemology, and the Unity of Science

- Offers translations and commentaries of key works by Lazare Carnot (1753–1823)
- Explores the relation between mechanics, mathematics and engineering from a conceptual, empirical and methodological point of view
- Helps readers to better understand the connection between mathematical science and philosophy in Carnot's works

This book offers insights relevant to modern history and epistemology of physics, mathematics and, indeed, to all the sciences and engineering disciplines emerging of 19th century. This research volume is the first of a set of three Springer books on Lazare Nicolas Margu r te Carnot's (1753–1823) remarkable work: *Essay on Machines in General* (*Essai sur les machines en g n ral* [1783] 1786). The other two forthcoming volumes are: *Principes fondamentaux de l' quilibre et du mouvement* (1803) and *G om trie de position* (1803). Lazare Carnot – l'organisateur de la victoire – in *Essai sur le machine en g n ral* (1786) assumed that the generalization of machines was a necessity for society and its economic development. Subsequently, his new coming science applied to machines attracted considerable interest for technician, as well, already in the 1780's. With no lack in rigour, Carnot used geometric and trigonometric rather than algebraic arguments, and usually went on to explain in words what the formulae contained. His main physical– mathematical concepts were the Geometric motion and Moment of activity–concept of Work . In particular, he found the invariants of the transmission of motion (by stating the principle of the moment of the quantity of motion) and theorized the condition of the maximum efficiency of mechanical machines (i.e., principle of continuity in the transmission of power). While the core theme remains the theories and historical studies of the text, the book contains an extensive Introduction and an accurate critical English Translation – including the parallel text edition and substantive critical /explicative notes – of *Essai sur les machines en g n ral* (1786).

Order online at [springer.com](https://www.springer.com) / or for the Americas call (toll free) 1-800-SPRINGER / or email us at: customerservice@springernature.com. / For outside the Americas call +49 (0) 6221-345-4301 / or email us at: customerservice@springernature.com.

The first € price and the £ and \$ price are net prices, subject to local VAT. Prices indicated with [1] include VAT for books; the €(D) includes 7% for Germany, the €(A) includes 10% for Austria. Prices indicated with [2] include VAT for electronic products; 19% for Germany, 20% for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted. [3] No discount for MyCopy.

