

1. Record Nr.	UNINA9910863132303321
Titolo	Artificial Hearts : Technology and Therapy Management / / edited by Ming Yang
Pubbl/distr/stampa	Springer Singapore, 2020 Singapore : , : Springer Singapore : , : Imprint : Springer, , 2020
ISBN	981-15-4378-X
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (220 pages) : illustrations
Disciplina	617.4120592
Soggetti	Biomedical engineering Engineering design Heart - Surgery Automatic control Robotics Mechatronics Biomedical Engineering/Biotechnology Engineering Design Cardiac Surgery Control, Robotics, Mechatronics Pròtesis Enginyeria biomèdica Cor artificial Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Evolution of Artificial Heart Technology -- Chapter 2. Mechanisms of Heart Failure -- Chapter 3. Basis of Artificial Heart Technologies -- Chapter 4. Artificial Heart: Rotary Pump -- Chapter 5. Artificial Heart: Volume-Displacement Pump -- Chapter 6. Total Artificial Heart -- Chapter 7. Evaluation of Artificial Hearts -- Chapter 8. Selection of Artificial Heart Devices -- Chapter 9. Therapy Management of VADs -- Chapter 10. Challenges of Artificial Heart Devices -- Chapter 11. A Primary Study for Biocompatible Ventricular

Assist Devices.

Sommario/riassunto

This book provides a comprehensive introduction to artificial hearts, summarizing the latest advances in basic technologies, design, evaluation, and management. Featuring 11 chapters, it discusses the origins of the artificial heart, the mechanisms of heart failure, and the principles of artificial heart technologies. Further, it offers an overview of rotary pumps and volume-displacement pumps, and addresses total artificial hearts. Lastly, the book covers evaluation, selection, therapy management, challenges, and the latest innovations. Given its scope, it is a valuable resource for researchers and technicians in the area of biomedical engineering, as well as surgeons.