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Descrizione fisica	1 online resource (180 pages)
Collana	Green Energy and Technology, , 1865-3529
Disciplina	621.4025
Soggetti	Thermodynamics Heat engineering Heat - Transmission Mass transfer Building construction Renewable energy resources Engines Machinery Engineering Thermodynamics, Heat and Mass Transfer Building Physics, HVAC Renewable and Green Energy Engine Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Fundamentals -- Compression heat pumps and their main components -- The absorption heat pumps -- Heat pumps' operation -- The refrigerants -- The external sources water and ground -- The hybrid systems -- Hints of thermodynamics.
Sommario/riassunto	The text describes the main features of currently available heat pumps, focusing on system operation and interactions with external heat sources. In fact, before choosing a heat pump, several aspects must be assessed in detail: the actual climate of the installation site, the building's energy requirements, the heating system, the type of operation etc. After discussing the general working principles, the book describes the main components of compression machines – for EHPs,

GHPs and CO2 heat pumps. It then addresses absorption heat pumps and provides additional details on the behavior of two-fluid mixtures. The book presents a performance comparison for the different types, helping designers choose the right one for their needs, and discusses the main refrigerants. Notes on helpful additional literature, websites and videos, also concerning relevant European regulations, round out the coverage. This book will be of interest to all engineers and technicians whose work involves heat pumps. It will also benefit students in energy engineering degree programs who want to deepen their understanding of heat pumps.