

1. Record Nr.	UNINA9910720092303321
Titolo	CO2 refrigeration cycle and systems // Xin-rong Zhang and Trygve Magne Eikevik, editors
Pubbl/distr/stampa	Cham, Switzerland : , : Springer Nature Switzerland AG, , [2023] ©2023
ISBN	9783031225123 9783031225116
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (355 pages)
Collana	Lecture Notes in Energy, , 2195-1292 ; ; 96
Disciplina	546.6812
Soggetti	Carbon dioxide - Industrial applications Refrigeration and refrigerating machinery
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Natural Refrigerants and Carbon Dioxide -- CO2 Vapor Compression Cycles related to Refrigeration -- Theoretical Analysis of Expansion Process and Components in CO2 (Transcritical) Refrigeration System -- Study on CO2 Evaporation and CO2 Evaporators+Gas Cooler -- CO2 Commercial Refrigeration Cycle and Systems -- CO2 Refrigeration System for Ice Rink and Snow Making -- CO2 Air-Conditioning System -- Industrial Cooling System -- CO2 Trans-triple-point Refrigeration Method.
Sommario/riassunto	This book covers the fundamentals and applications of carbon dioxide vapor compression refrigeration thermodynamic cycles. In particular, it presents new application areas, such as making ice and snow in the Winter Olympic Games, food cooling and refrigeration. The book explores the physical and chemical characteristics of CO2 fluid, and the unique traits of its thermodynamic cycle. The contributors explain how CO2 refrigeration is a developing, eco-friendly technology, and emphasize its importance for refrigeration and air-conditioning in the current and future market. This book is a valuable source of information for researchers, engineers and policy makers looking to expand their applicable knowledge of high-potential refrigeration technology using carbon dioxide. It is also of interest to postgraduate

students and practitioners looking for an academic insight into the industry's latest eco-friendly technologies. .
