

1. Record Nr.	UNINA9910823979103321
Autore	Ahlers Mark
Titolo	An introduction to aircraft thermal management / / Mark Ahlers
Pubbl/distr/stampa	Warrendale, Pa. (400 Commonwealth Dr., Warrendale PA USA) : , : Society of Automotive Engineers, , 2020
ISBN	0-7680-9344-9 1-5231-4046-1 0-7680-9552-2
Edizione	[1st ed.]
Descrizione fisica	1 online resource (1 PDF (xvii, 186 pages)) : illustrations (some color), maps
Collana	Society of Automotive Engineers. Electronic publications
Disciplina	629.134
Soggetti	Aerothermodynamics Aerodynamic heating TECHNOLOGY & ENGINEERING / Aeronautics & Astronautics SCIENCE / Mechanics / Thermodynamics Aerospace and aviation technology Astronautics Thermodynamics and heat
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Why aircraft thermal management matters -- Chapter 2. Temperature and thermal-related requirements -- Chapter 3. Airplane-generated heat sources -- Chapter 4. External heat sources -- Chapter 5. Aircraft heat sinks -- Chapter 6. Fires and failures -- Chapter 7. Environmental control systems -- Chapter 8. Thermal design -- Chapter 9. Analytical modeling -- Chapter 10. Analytical software -- Chapter 11. Testing -- Chapter 12. Military aircraft thermal management.
Sommario/riassunto	Aircraft thermal management (ATM) focuses on how to manage heat in an aircraft to meet the temperature requirements for passengers and vehicle. This primarily involves removing heat and protecting equipment, systems, and structure from heat sources that could raise their temperature beyond design limits. Crew and passengers must be neither too hot nor too cold during airplane operations. Thus,

maintaining thermal comfort is critically important, and not a trivial operation.

---