

The Global Market for Thermal Management Technologies

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Abstracts

Summary:

The global market for thermal management (TM) technologies is estimated to grow from \$19.8 billion in 2025 to reach \$30 billion by the end of 2030, at a compound annual growth rate (CAGR) of 8.6% from 2025 to 2030.

Thermal management technologies and components are next-generation systems designed to control, dissipate and optimize heat in various electronic and industrial applications. These technologies are essential for ensuring dependability, effectiveness and performance of systems subjected to high thermal loads. To overcome issues with overheating, power density and miniaturization while preserving system longevity and energy efficiency, industries such as automotive, consumer electronics, telecommunications and data centers are implementing advanced TM solutions.

Report Scope

The report analyzes the global thermal management (TM) technologies market across key segments, including device type, product type and application. By device type, the market encompasses convection cooling devices, conduction cooling devices, hybrid cooling devices and advanced cooling devices that enable efficient heat dissipation and temperature regulation in various systems. By product type, the market covers hardware, thermal interface materials, software solutions for simulation and design optimization, specialized services, and substrates that enhance thermal conductivity and integration efficiency. TM technologies are deployed across various applications, such as consumer electronics, industrial and military electronics, data centers, automotive systems, healthcare equipment, telecommunications infrastructure,

renewable energy systems and other specialized sectors where precise heat control is essential for performance, reliability and longevity.

The report provides a comprehensive regional analysis covering North America, Europe, the Asia-Pacific region, and the Rest of the World (RoW), which includes Latin America, the Middle East, and Africa. It evaluates market dynamics, including drivers, challenges and emerging trends, while highlighting innovations in material design and performance enhancements. The study concludes with an analysis of major companies in the market and their products/services. The base year for the study is 2024, with projections for the years 2025 through 2030, including compound annual growth rate (CAGR) for the forecast period.

Report Includes

58 data tables and 38 additional tables

An overview of the global market for thermal management (TM) technologies

In-depth analysis of global market trends, featuring historical revenue data for 2024, estimated figures for 2025, as well as forecasts for 2027 and 2029. This analysis includes projections of compound annual growth rates (CAGRs) through 2030

Evaluation of the current market size and revenue growth prospects specific to thermal management technologies, accompanied by a market share analysis by product type, application, device and region

Analysis of current and future demand in the global thermal management technologies market, along with a detailed analysis of the competitive environment, market regulations and reimbursement practices

Information on concept development of and hardware test for effective thermal designs and power dissipation and environmental factors affecting thermal management systems, and discussion of rapid prototyping, thermal sensing technologies, new manufacturing processes and developments in thermal management software, such as computational fluid design and heat transfer

Analysis of drivers, challenges and opportunities affecting market growth

Coverage of evolving technologies, the current and future market potential, R&D activities, growth strategies, new product pipeline, regulatory framework and reimbursement scenarios, and ESG trends of the market

Market share analysis of the key market participants in the thermal management technologies market, along with their research priorities, product portfolios, global rankings and competitive landscape

Profiles of the major companies, including 3M, Honeywell International Inc., Henkel AG & Co. KGaA, Dow and Parker Hannifin Corp.

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3M

GENTHERM
HONEYWELL INTERNATIONAL INC.
Thermal Management Hardware Providers
ALCOA CORP.
ASETEK INC. A/S
COMAIR ROTRON
Thermal Management Software Providers
ALTAIR ENGINEERING INC.
ANSYS INC.
HEXAGON AB
Thermal Management Interface Materials Providers
AMETEK INC.
DOW
HENKEL AG & CO. KGAA
PARKER HANNIFIN CORP.
ROGERS CORP.

Thermal Management Substrates Providers
AMKOR TECHNOLOGY
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