

Global Thermal Systems Market Size study & Forecast, by Component (Compressor, HVAC, Powertrain Cooling, and Fluid Transport), by Vehicle Type (Passenger Vehicles and Commercial Vehicles), by Propulsion Type (IC Engine Vehicles, Electric Vehicles, and Hybrid Vehicles) and Regional Forecasts 2025-2035

<https://marketpublishers.com/r/TC6DC9556481EN.html>

Date: July 2025

Pages: 285

Price: US\$ 3,750.00 (Single User License)

ID: TC6DC9556481EN

Abstracts

The Global Thermal Systems Market is valued approximately at USD 41.03 billion in 2024 and is anticipated to expand at a compound annual growth rate (CAGR) of more than 2.50% over the forecast period 2025–2035. As the automotive sector rapidly transforms amid global climate goals, thermal systems have evolved into mission-critical components of both traditional and next-generation vehicles. From optimizing energy efficiency to regulating cabin comfort and ensuring safe powertrain functionality, thermal management solutions play a foundational role in elevating vehicle performance. Fueled by the convergence of emission mandates, consumer demand for climate-controlled environments, and escalating electric vehicle (EV) adoption, the market is riding a steady trajectory of innovation. OEMs and Tier-1 suppliers are reengineering their platforms with integrated thermal architectures to meet the growing complexity of hybrid and battery-powered drivetrains, ensuring regulatory compliance and extending vehicle range.

The market is buoyed by the escalating penetration of electric and hybrid vehicles globally, pushing automakers to rethink cooling and heating mechanisms beyond legacy combustion systems. While internal combustion engine (ICE) vehicles rely primarily on radiator and engine-cooling systems, EVs and plug-in hybrids demand compact and intelligent thermal solutions to manage battery packs, inverters, and electronic power

modules efficiently. Advanced HVAC systems, thermal interface materials, and next-generation compressors are increasingly being tailored for reduced thermal losses and intelligent load balancing. This surge in thermal innovation not only enhances passenger comfort and energy conservation but also safeguards the structural integrity of key vehicle components across all propulsion platforms.

From a regional perspective, North America accounted for a significant share of the thermal systems market in 2025, underpinned by strong vehicle production volumes, robust R&D ecosystems, and a high rate of EV penetration—particularly in the U.S. California’s zero-emission vehicle targets and the broader Inflation Reduction Act have catalyzed a wave of sustainable automotive advancements. Meanwhile, Europe continues to push the envelope on decarbonization, with stringent CO₂ emission benchmarks and Green Deal initiatives driving automakers to deploy innovative thermal technologies across hybrid and electric vehicle lineups. On the other hand, Asia Pacific is projected to emerge as the fastest-growing region, driven by expanding automotive manufacturing hubs in China, India, South Korea, and Japan. China’s dominance in battery production and its robust EV infrastructure pipeline further magnify demand for advanced thermal solutions to maintain temperature-sensitive components at optimal efficiency.

Major market player included in this report are:

Denso Corporation

Hanon Systems

MAHLE GmbH

Valeo SA

BorgWarner Inc.

Robert Bosch GmbH

Dana Incorporated

Continental AG

Gentherm Incorporated

Visteon Corporation

Modine Manufacturing Company

Grayson Thermal Systems

Sanden Holdings Corporation

Eberspacher Gruppe GmbH & Co. KG

Keihin Corporation

Global Thermal Systems Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025-2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for

stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players.

The detailed segments and sub-segments of the market are explained below:

By Component:

Compressor

HVAC

Powertrain Cooling

Fluid Transport

By Vehicle Type:

Passenger Vehicles

Commercial Vehicles

By Propulsion Type:

IC Engine Vehicles

Electric Vehicles

Hybrid Vehicles

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

Contents

CHAPTER 1. GLOBAL THERMAL SYSTEMS MARKET REPORT SCOPE & METHODOLOGY

- 1.1. Research Objective
- 1.2. Research Methodology
 - 1.2.1. Forecast Model
 - 1.2.2. Desk Research
 - 1.2.3. Top Down and Bottom-Up Approach
- 1.3. Research Attributes
- 1.4. Scope of the Study
 - 1.4.1. Market Definition
 - 1.4.2. Market Segmentation
- 1.5. Research Assumption
 - 1.5.1. Inclusion & Exclusion
 - 1.5.2. Limitations
 - 1.5.3. Years Considered for the Study

CHAPTER 2. EXECUTIVE SUMMARY

- 2.1. CEO/CXO Standpoint
- 2.2. Strategic Insights
- 2.3. ESG Analysis
- 2.4. Key Findings

CHAPTER 3. GLOBAL THERMAL SYSTEMS MARKET FORCES ANALYSIS

- 3.1. Market Forces Shaping the Global Thermal Systems Market (2024–2035)
- 3.2. Drivers
 - 3.2.1. Increasing Electrification of Vehicles Boosting Demand for Advanced Thermal Management
 - 3.2.2. Stringent Emission Regulations Mandating Energy Efficiency in Vehicles
- 3.3. Restraints
 - 3.3.1. High Initial Costs Associated with Advanced Thermal Components
 - 3.3.2. Complex Integration in Multi-Propulsion Powertrains
- 3.4. Opportunities
 - 3.4.1. Emerging Demand from Autonomous and Connected Vehicles
 - 3.4.2. Innovations in Thermal Interface Materials and Smart HVAC Systems

CHAPTER 4. GLOBAL THERMAL SYSTEMS INDUSTRY ANALYSIS

- 4.1. Porter's 5 Forces Model
 - 4.1.1. Bargaining Power of Buyer
 - 4.1.2. Bargaining Power of Supplier
 - 4.1.3. Threat of New Entrants
 - 4.1.4. Threat of Substitutes
 - 4.1.5. Competitive Rivalry
- 4.2. Porter's 5 Force Forecast Model (2024–2035)
- 4.3. PESTEL Analysis
 - 4.3.1. Political
 - 4.3.2. Economical
 - 4.3.3. Social
 - 4.3.4. Technological
 - 4.3.5. Environmental
 - 4.3.6. Legal
- 4.4. Top Investment Opportunities
- 4.5. Top Winning Strategies (2025)
- 4.6. Market Share Analysis (2024–2025)
- 4.7. Global Pricing Analysis and Trends 2025
- 4.8. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL THERMAL SYSTEMS MARKET SIZE & FORECASTS BY COMPONENT 2025–2035

- 5.1. Market Overview
- 5.2. Global Thermal Systems Market Performance – Potential Analysis (2025)
- 5.3. Compressor
 - 5.3.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 5.3.2. Market Size Analysis, by Region, 2025–2035
- 5.4. HVAC
 - 5.4.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 5.4.2. Market Size Analysis, by Region, 2025–2035
- 5.5. Powertrain Cooling
 - 5.5.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 5.5.2. Market Size Analysis, by Region, 2025–2035
- 5.6. Fluid Transport
 - 5.6.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

5.6.2. Market Size Analysis, by Region, 2025–2035

CHAPTER 6. GLOBAL THERMAL SYSTEMS MARKET SIZE & FORECASTS BY VEHICLE TYPE 2025–2035

6.1. Market Overview

6.2. Passenger Vehicles

6.2.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

6.2.2. Market Size Analysis, by Region, 2025–2035

6.3. Commercial Vehicles

6.3.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

6.3.2. Market Size Analysis, by Region, 2025–2035

CHAPTER 7. GLOBAL THERMAL SYSTEMS MARKET SIZE & FORECASTS BY PROPULSION TYPE 2025–2035

7.1. Market Overview

7.2. IC Engine Vehicles

7.2.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

7.2.2. Market Size Analysis, by Region, 2025–2035

7.3. Electric Vehicles

7.3.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

7.3.2. Market Size Analysis, by Region, 2025–2035

7.4. Hybrid Vehicles

7.4.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

7.4.2. Market Size Analysis, by Region, 2025–2035

CHAPTER 8. GLOBAL THERMAL SYSTEMS MARKET SIZE & FORECASTS BY REGION 2025–2035

8.1. Thermal Systems Market, Regional Market Snapshot

8.2. Top Leading & Emerging Countries

8.3. North America Thermal Systems Market

8.3.1. U.S.

8.3.1.1. Component Breakdown Size & Forecasts, 2025–2035

8.3.1.2. Vehicle Type Breakdown Size & Forecasts, 2025–2035

8.3.1.3. Propulsion Type Breakdown Size & Forecasts, 2025–2035

8.3.2. Canada

8.3.2.1. Component Breakdown Size & Forecasts, 2025–2035

8.3.2.2. Vehicle Type Breakdown Size & Forecasts, 2025–2035

8.3.2.3. Propulsion Type Breakdown Size & Forecasts, 2025–2035

8.4. Europe Thermal Systems Market

8.4.1. UK

8.4.2. Germany

8.4.3. France

8.4.4. Spain

8.4.5. Italy

8.4.6. Rest of Europe

8.5. Asia Pacific Thermal Systems Market

8.5.1. China

8.5.2. India

8.5.3. Japan

8.5.4. Australia

8.5.5. South Korea

8.5.6. Rest of Asia Pacific

8.6. Latin America Thermal Systems Market

8.6.1. Brazil

8.6.2. Mexico

8.7. Middle East & Africa Thermal Systems Market

8.7.1. UAE

8.7.2. Saudi Arabia

8.7.3. South Africa

8.7.4. Rest of Middle East & Africa

CHAPTER 9. COMPETITIVE INTELLIGENCE

9.1. Top Market Strategies

9.2. Denso Corporation

9.2.1. Company Overview

9.2.2. Key Executives

9.2.3. Company Snapshot

9.2.4. Financial Performance (Subject to Data Availability)

9.2.5. Product/Services Port

9.2.6. Recent Development

9.2.7. Market Strategies

9.2.8. SWOT Analysis

9.3. MAHLE GmbH

9.4. Robert Bosch GmbH

- 9.5. Valeo SA
- 9.6. Hanon Systems
- 9.7. BorgWarner Inc.
- 9.8. Continental AG
- 9.9. Dana Incorporated
- 9.10. Gentherm Incorporated
- 9.11. Visteon Corporation
- 9.12. Modine Manufacturing Company
- 9.13. Sanden Holdings Corporation
- 9.14. Grayson Thermal Systems
- 9.15. Keihin Corporation

List Of Tables

LIST OF TABLES

- Table 1. Global Thermal Systems Market, Report Scope
- Table 2. Global Thermal Systems Market Estimates & Forecasts By Region 2024–2035
- Table 3. Global Thermal Systems Market Estimates & Forecasts By Component 2024–2035
- Table 4. Global Thermal Systems Market Estimates & Forecasts By Vehicle Type 2024–2035
- Table 5. Global Thermal Systems Market Estimates & Forecasts By Propulsion Type 2024–2035
- Table 6. U.S. Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 7. Canada Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 8. UK Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 9. Germany Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 10. France Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 11. Spain Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 12. Italy Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 13. Rest of Europe Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 14. China Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 15. India Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 16. Japan Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 17. Australia Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 18. South Korea Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 19. Rest of Asia Pacific Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 20. Brazil Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 21. Mexico Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 22. UAE Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 23. Saudi Arabia Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 24. South Africa Thermal Systems Market Estimates & Forecasts, 2024–2035
- Table 25. Rest of Middle East & Africa Thermal Systems Market Estimates & Forecasts, 2024–2035

List Of Figures

LIST OF FIGURES

- Figure 1. Global Thermal Systems Market, Research Methodology
- Figure 2. Global Thermal Systems Market, Market Estimation Techniques
- Figure 3. Global Market Size Estimates & Forecast Methods
- Figure 4. Global Thermal Systems Market, Key Trends 2025
- Figure 5. Global Thermal Systems Market, Growth Prospects 2024–2035
- Figure 6. Global Thermal Systems Market, Porter's Five Forces Model
- Figure 7. Global Thermal Systems Market, PESTEL Analysis
- Figure 8. Global Thermal Systems Market, Value Chain Analysis
- Figure 9. Thermal Systems Market By Component, 2025 & 2035
- Figure 10. Thermal Systems Market By Vehicle Type, 2025 & 2035
- Figure 11. Thermal Systems Market By Propulsion Type, 2025 & 2035
- Figure 12. North America Thermal Systems Market, 2025 & 2035
- Figure 13. Europe Thermal Systems Market, 2025 & 2035
- Figure 14. Asia Pacific Thermal Systems Market, 2025 & 2035
- Figure 15. Latin America Thermal Systems Market, 2025 & 2035
- Figure 16. Middle East & Africa Thermal Systems Market, 2025 & 2035
- Figure 17. Global Thermal Systems Market, Company Market Share Analysis (2025)

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