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Report Information

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Automotive Thermal Management System Market Research Report - Global Forecast till 2030

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Description:

Automotive Thermal Management System Market Overview:

Automotive Thermal Management System Market in terms of value is estimated to register **4% CAGR** during the forecast period 2022-2030.

The global market is expected to witness rapid growth during the forecast period. The market in Asia-Pacific is estimated to dominate the automotive thermal management system market. The existing infrastructure and major players in this region provide the market in Asia-Pacific with various opportunities for significant growth in the forecast period. The Asia-Pacific is a key market for automotive components due to the countries of China, Japan, India, and South Korea. In Asia-Pacific, China accounted for the largest market share due to the increased consumption of passenger and commercial vehicles. The massive increase in the production of electric vehicles will result in extensive installation of thermal management systems in electric vehicles. Increased sales of electric vehicles will require high-end technology to be installed in the vehicles. Growing demand for e-mobility, purchasing power of consumers and stringent regulation regarding the fuel economy with limited greenhouse emissions will drive the growth for automotive thermal management system. Japan is expected to witness the highest growth during the forecast period owing to the presence of leading automotive thermal management system manufacturers such as Denso Corporation.

In 2018, Europe held the second largest market share in the automotive thermal management system market. The European Union revealed regulatory laws for vehicle emissions. Moreover, France and the UK have already announced their timelines for vehicle zero emission zones, which increase the demand for thermal management system in the vehicle. The newly designed thermal management system improves fuel efficiency by optimizing the output from HVAC, powertrain cooling, and fluid transport. This increased demand among OEMs for the development of advanced powertrain cooling technologies will result in the growth of the automotive thermal management system in future.

Key Competitors

The Key Players of the Global Automotive Thermal Management System Market are Denso Corporation (Japan), Modine Manufacturing Company (US), MAHLE GmbH (Germany), Valeo (France), Gentherm (US), Hanon Systems (South Korea), DuPont (US), Continental AG (Germany), Renesas Electronics Corporation (Japan), Ymer Technology (Sweden), NORMA Group (Germany), BorgWarner Inc. (US), Robert Bosch GmbH (Germany), Dana Limited (US), and VOSS Automotive GmbH (Germany)

Segmentation

The Global Automotive Thermal Management System Market is segmented based on Component, Technology, Application, Vehicle Type and Propulsion.

By Component, the power distribution box segment is expected to dominate the global market. The power distribution box enclosure contains an assembled circuit-breaker panel board and offers a cost-effective and convenient way to protect against temperature fluctuations.

By Technology, the engine thermal mass reduction segment is expected to dominate the market.

Engine thermal mass stands for mass of a building which enables it to store heat, providing inertia force against temperature fluctuations in engine.

By Application, the engine cooling segment is expected to dominate the market. The thermal management system keeps the engine cool and maintains its temperature warm enough to ensure efficient, clean operation.

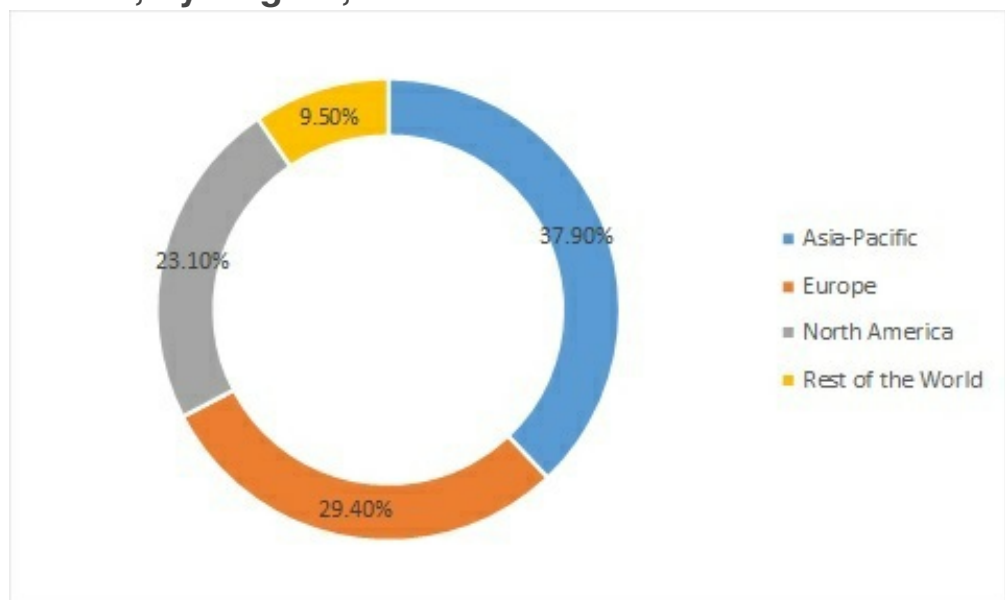
By Vehicle Type, the passenger car segment dominates the market. Passenger car are used to carry passengers rather than goods. Rise in demand for passenger cars due to the increased population, rising purchasing power and stringent government regulations regarding the vehicle emission level are expected to enhance the market share for the passenger car segment.

By propulsion, the ICE vehicle primarily uses the gasoline or diesel, as a fuel along with the renewable or alternative fuels. In IC engine vehicles, the ignition and combustion of the fuel occurs within the engine itself then the engine partially converts the energy from the combustion to mechanical work as the expanding combustion gases push the piston, which rotates the crankshaft.

Regional Analysis

By region, the Global Automotive Thermal Management System Market is segmented into North America, Europe, Asia-Pacific (APAC), and the Rest of the World.

Global Automotive Thermal Management System Market, by Region, 2018



Source: MRFR Analysis

The North America market is one of the significant markets for global automotive thermal management system owing to growing investments on research & development to promote the vehicle advanced technologies and increased presence of major manufacturers will increase the revenue for the thermal management systems during the forecast period. The market in North America is growing due to factors such as increased government backing and support, investment in research & development, large potential consumer base, and demand for fuel efficiency in the vehicles, contribute in the thermal management systems sales. Such factors are expected to lead to the growth of the automotive thermal management system market in North America during the forecast period.

In the US, the US Environmental Protection Agency (EPA) and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) established new fuel economy and greenhouse gas standards for vehicles. The standards are applied to Passenger Vehicle and light trucks from 2012. These standards enhanced the demand for thermal management systems by 26% in the country. The EPA and NHTSA are planning for new standards for the period of 2022-2025, which may finish by the end of 2018. These news standards will bring opportunities for the manufacturers in the country to innovate and develop new advanced thermal management systems to meet the growing demand of the thermal systems in the vehicles. The participation of big organizations for the development of thermal management will increase the demand and sales for the thermal management system.

Synopsis

The Global Automotive Thermal Management System Market has been segmented on the basis of Component, Technology, Application, Vehicle Type, Propulsion, and Region. On the basis of

component, the power distribution box segment is expected to dominate the global market. The power distribution box enclosure contains an assembled circuit-breaker panel board and offers a cost-effective and convenient way to protect against temperature fluctuations.

Market Segmentation

- By Component - Power Distribution Box, Domain Controller Units, ECU'S, Inverter, Converters, Connectors, Power Integrated Circuits (ICs), and Others
- By Technology - Active Transmission Warmup, Engine Thermal Mass Reduction, Exhaust Gas Recirculation, and Others
- By Application - Engine Cooling, Transmission Cooling, Waste Heat Recovery and Others
- By Vehicle Type - Passenger Cars and Commercial Vehicles
- By Propulsion - Internal Combustion Engine (ICE) Vehicle and Electric Vehicle

Key Questions Addressed by the Report

- What was the historic market size (2018)?
- Which segmentation (Component, Technology, Application, Vehicle type, and Propulsion) is driving market?
- What will be the growth rate by 2025?
- How are the key players in this market?
- What are the strategies adopted by key players ?

Infographic Summary:

Global automotive thermal management system market

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