

# Global Exhaust Gas Recirculation (EGR) Cooler Market: Analysis By Engine Type (Diesel and Gasoline), By Vehicle Type (Commercial and Passenger), By Region Size and Trends with Impact of COVID-19 and Forecast up to 2026

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# **Abstracts**

In 2021, the global EGR cooler market was valued at US\$534.85 million. The market is projected to reach US\$616.05 million by 2026. The Exhaust Gas Recirculation (EGR) cooler is a crucial part of car engines used to reduce Nitrous Oxide (NOx) levels. By rupturing chemical bonds in the combustion chamber of the engine, extreme heat creates new, harmful chemicals. Exhaust gas cooling reduces temperature peaks and slows the rate of combustion. The primary function of EGR coolers is to reduce nitrous oxide levels by cooling exhaust gases before they are recirculated into the engine. New emission standards introduced by the governments and international organizations is a major driver of the market. The EGR cooler market is expected to grow at a CAGR of 3.07% during the forecast period of 2022-2026.

# Market Segmentation Analysis:

By Engine Type: The report identifies two segments on the basis of engine type: Diesel and Gasoline. In 2021, the diesel segment accounted for more than 70% of the market. The diesel segment held the highest share as EGR coolers are mostly used in diesel based engines. Diesel engines produces more pollutant than others. Therefore, the use of EGR coolers have increased in diesel engines. The gasoline segmet has been also increasing rapidly. Due to stringent regulations regarding new emission standars, use of EGR cooler in the gaoline engines have also increased.

By Vehicle Type: The report includes bifurcation of the market into two segments on the



basis of vehicle type: Commecial Vehicle and Passenger Vehicle. The commercial vehicle segment acconted for more than 60% share of the market. Commercial vehicle segment recorded the highest share because the engines used in commercial or heavy duty vehicles are diesel engines. In addition, due to increasing commercial activities, use of commercial vehicles has increased in the delivery processes. So, increasing use of commercial vehicles has also supported the market growth.

By Region: In this report, the global EGR Cooler market is divided into five regions: Asia Pacific, Europe, North America, Latin America and Middle East & Africa. In 2021, Asia Pacific dominated the market by occupying almost half of the share of the market. The growing automotive market in the region boosting the EGR cooler market in the region. The region comprises of countries like China, Japan, India, etc. where automobile industry contributes a large portion of the economy. Increasing car production in these regions would help the market to grow in the Asia Pacific region.

# Global EGR Cooler market Dynamics

Growth Drivers: The market has been growing over the past few years, due to factors such as increasing CO? emissions, increasing sales of vehicles, rising demand for fuel efficient mechanism, new emission standards applied on automotive sector, etc. In developing nations, carbon dioxide emissions from burning fossil fuels have significantly increased, because industrialization is a crucial component of developing economies. various governments around the world set emission standards to control the pollution. Due to this reason, use of EGR coolers in the automotive industry is increasing as the vehicle manufacturers need to meet the emission standards set by respective governments and international organizations. Furthermore, EGR cooler helps to enhance the fuel efficiency. Due to these factors, the market is expected to growing fast.

Challenges: However, the market has been confronted with some challenges specifically, fouling problem in EGR cooler, rising adoption of electric vehicle, etc. One of the key problems is the fouling of the EGR cooler, which is the deposition of particulate matter (PM) as a result of the thermophoretic force between the cooler wall and flow field. EGR cooler fouling decreases the heat exchanger's ability to transfer heat effectively, and increases NOx emissions. Fouling of EGR cooler tend to be the predominate factors of EGR system failure. Furthermore, rising adoption of electric vehicles would also restrain the market growth as EVs do not require EGR coolers.



Trends: The market is projected to grow at a fast pace during the forecast period, due to various latest trends such as innovations associated with EGR Coolers, EGR cooler with bypass, etc. New exhaust gas recirculation (EGR) cooler is equipped with a bypass channel to reduce incomplete combustion and the resulting emissions of hydrocarbons and soot. The new EGR cooler's integrated bypass channel feeds exhaust gases back into the combustion chambers when the engine temperature is low. EGR cooler with bypass has the ability to enhance the performance of the vehicle. The new advancements are expected to drive the market growth.

Impact Analysis of COVID-19 and Way Forward:

The growth of the market for EGR cooler manufacturers has been restricted by the global spread of the COVID-19 epidemic. Due to the worldwide closure of manufacturing facilities in the first two quarter of 2020, sales of exhaust gas recirculation coolers fell precipitously. The governments of many nations implemented lockdowns. Although the performance of the key participants in the EGR cooler industry has been held down by the closure of production facilities and a lack of workers. The absence of vehicle movement had a significant impact on the transportation industry.

The first half of 2020 saw a considerable decline in the EGR market. However, the pandemic accelerated the need for emission-free transportation, particularly in industrialized nations like China, Europe, and the US. EGR cooler began receiving a lot of attention as governments around the world consider how to recover from the pandemic with an economy that is stronger and more resilient than it was before.

# Competitive Landscape:

The EGR cooler market is concentrated. Global players have strong dominance in the market, however, domestic players like KORENS Co., Ltd. has been a pioneer in the field of EGR cooler.

The key players of the global EGR cooler market are:

BorgWarner Inc.

Senior plc (Senior Flexonics)

Rheinmentall AG (Rheinmentall Automotive AG)



**MAHLE** 

**Denso Corporation** 

Faurecia SE

Benteler international AG

Valeo S.A.

Hanon Systems

Tokyo Radiator MFG. Co. Ltd

KORENS Co., Ltd.

Tokyo Roki Co., Ltd



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