



Automotive

Exhaust Gas Recirculation Coolers for Gasoline Engines

Location	Japan
Environment	Outdoor
Grade/surface	SUS430J1 and SUS444
Manufacturer	Maruyasu Industries Co.,Ltd.
Material supplier	Nippon Steel and Sumikin Stainless Co., Nisshin Steel, JFE Steel
Source of information	JSSA

The Exhaust Gas Recirculation Cooler for gasoline engines has been developed to improve fuel efficiency. By cooling exhaust gases and recycling a large volume of the gas, this unit reduces pumping loss in the low-load region and improves the knocking limit in the high-load region, which improves the compression ratio. The traditional material of choice for EGR coolers has been austenitic stainless steel, but for this particular type, a ferritic grade of stainless steel has been adopted for the first time, considering the performance demands made by high-temperature exhaust gases, as well as the need to stabilise cost and reduce weight. This type of product will be adopted in a number of gasoline vehicles in the future in order to respond to every tightening fuel emission regulations.

