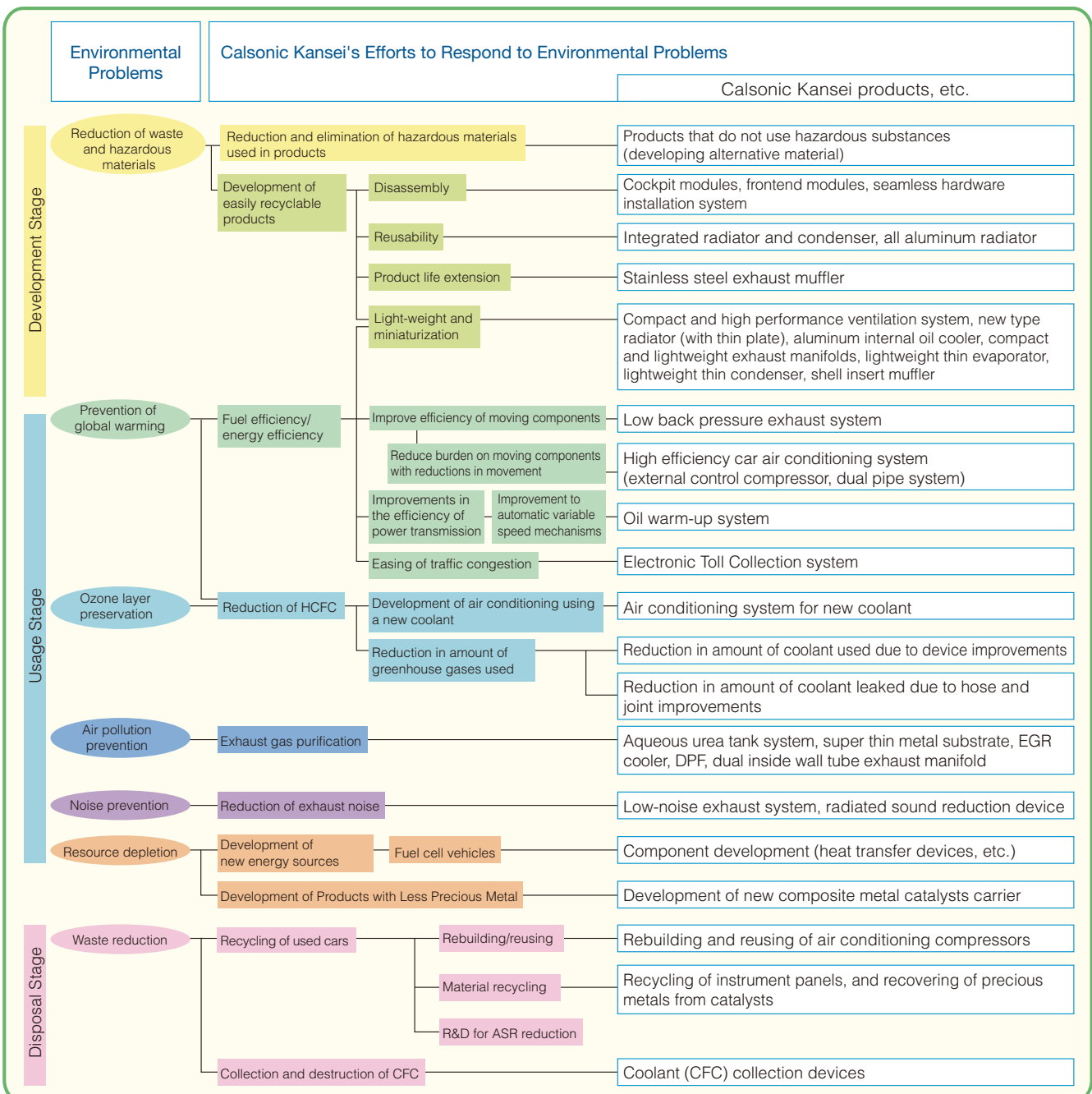


Environmentally Friendly Product Development

At Calsonic Kansei, we work toward developing products that reduce the environmental impact throughout the entire life cycle of our products with “environmentally friendly product development” as our concept. When developing environmentally friendly products, we adhere to requirements in fuel efficiency/energy efficiency, compaction/lightweight design, simplification of recycling processes, elimination/minimization of hazardous substances, etc. To adapt products to these requirements, it is necessary to consider these requirements from the first stage of development.

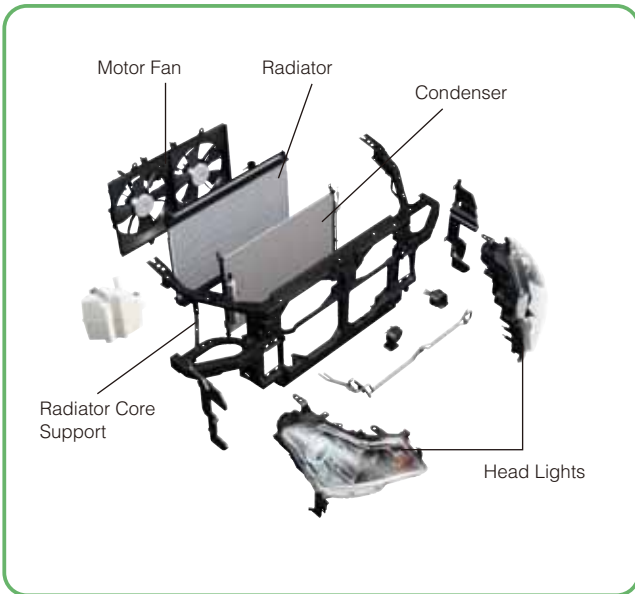
At Calsonic Kansei, in addition to development assessing the Quality, Cost, Delivery and patent, we promote environmentally friendly product development by assessing the environmental aspects as well (E).

1 Calsonic Kansei's Efforts and Products for Responding to Environmental Problems



2 Total Reduction of Environmental Burden with Modulization

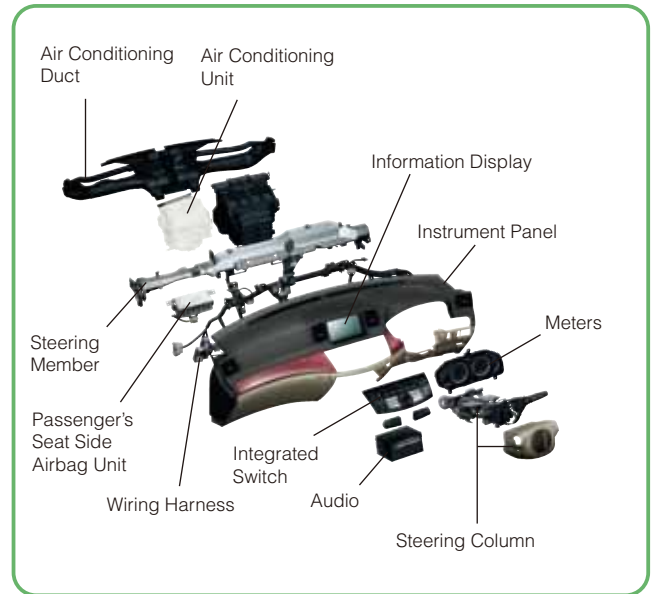
By conducting component and unit product development in composite units called modules, it is possible to promote various environmental merits, such as reduction in the number of parts, lightweight products, increased recyclability, and fuel efficient/energy efficient design.



Front-end Module

Uses the core support radiator as a supporting column, and integrates the front-end areas such as the radiator, condenser, and various other heat transfer devices. We are improving the size, assembly and disassembly.

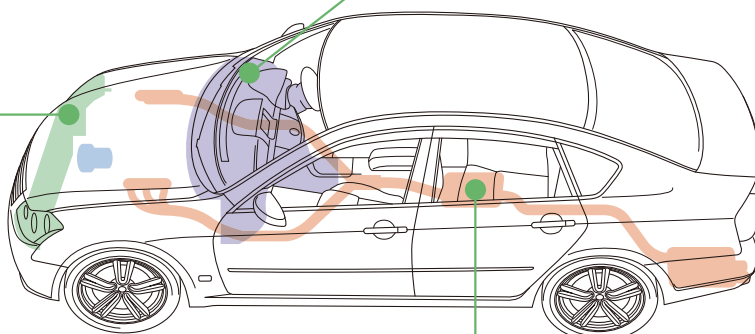
Reduction in the number of parts	35%~50%
Reduction in weight	5%~20%



Cockpit Module

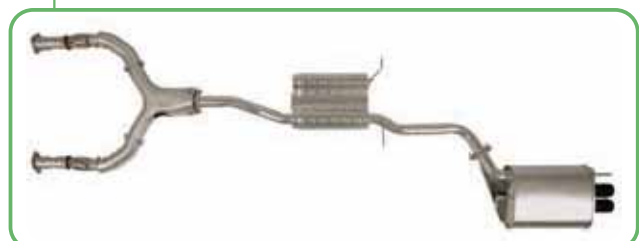
Uses the steering member as the framework, and combines the instrument panel, meters, ventilation unit, airbag, electronic control unit, etc. The keywords for our development are light-weight, and recyclability.

Reduction in the number of part connection points	35%
Reduction in the number of parts	18%
Reduction in weight	5%



Engine Exhaust Module

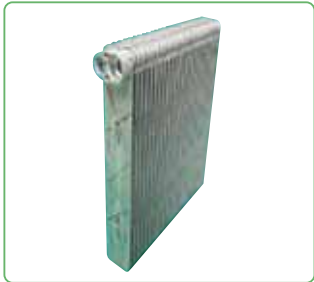
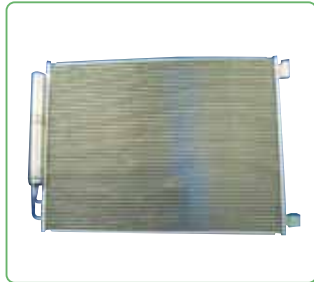
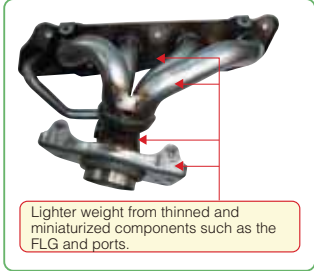

We develop the most suitable exhaust gas purification systems from the exhaust manifold, catalytic converter, center muffler, rear muffler to the finisher.



3 Prevention of Global Warming

We contribute to improve the energy efficiency of vehicles with development focusing on compact and lightweight design, and fuel/energy efficiency. This can be seen especially from many of our lightweight products.

Promoting Compact and Lightweight Vehicle Parts

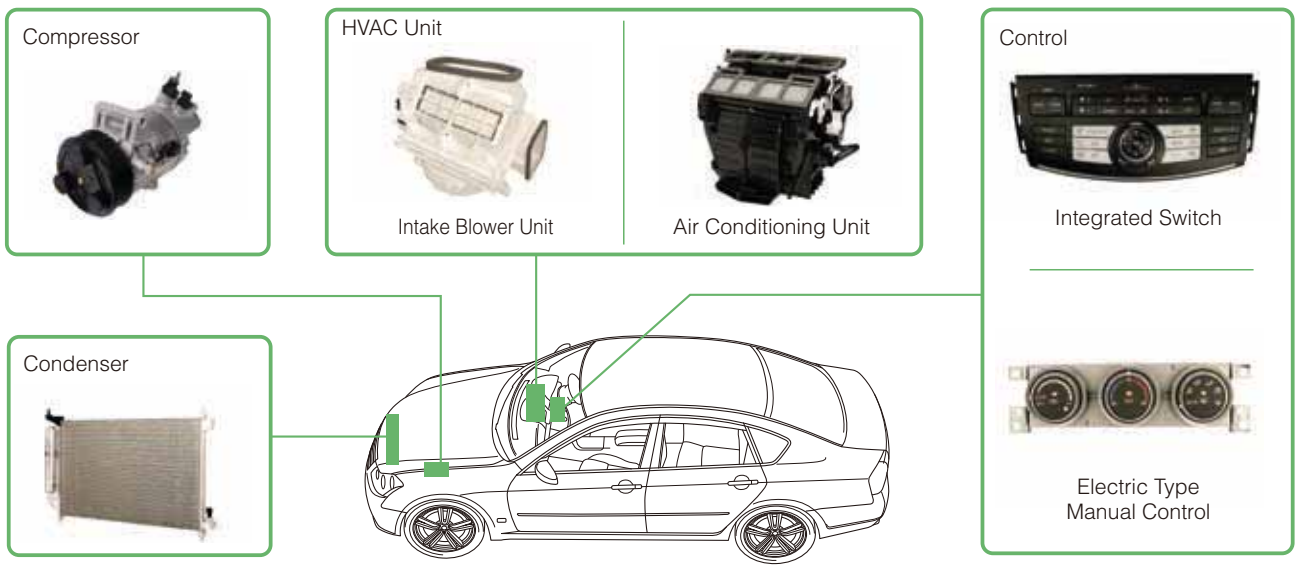
<p>Lightweight thin evaporator</p>  <p>Weight Reduction (using our conventional parts) 20%</p>	<p>Lightweight thin condenser</p>  <p>Weight Reduction (using our conventional parts) 12%</p>
<p>Compact Lightweight Exhaust Manifolds</p> <p>Made more lightweight by compact, thin plated components.</p>  <p>Weight Reduction (using our conventional parts) 38%</p> <p>Lighter weight from thinned and miniaturized components such as the FLG and ports.</p>	<p>Shell Inserted Type Muffler</p>  <p>Weight Reduction (using our conventional parts) 6%</p>

Development of Fuel-Efficient/Energy Efficient Products

HVAC Systems for Automobile

HVAC systems for automobile are constructed of many products such as air conditioning units (containing evaporators, heater cores, and blower motors), condensers, pipes, and controls.

At Calsonic Kansei, we develop environmentally friendly products such as the development of the compact and lightweight, HVAC systems made possible by the introduction of thin evaporators.



Compressors for Car Air Conditioners

At Calsonic Kansei, we are offering high-performance wobble continuous variable displacement compressors with excellent energy-efficiency due to continuous variability, and vane rotary fixed displacement compressors which are compact and lightweight due to a simplified shape. They are environmentally friendly contributing to fuel and energy efficiency as well as the reduction of CO₂ emissions.



4 Efficient Use of the Earth's Resources

At Calsonic Kansei, we strive to develop products that reduce the amount of new resources used by reducing the number of different types of materials in our products and developing products which are more recyclable.

Development of Products with Less Precious Metal

Development of New Metal Catalyst Substrate

We can anticipate the importance of emission purification technology that uses less precious metal will grow increasingly because of the number of automobiles being manufactured worldwide is increasing.

At Calsonic Kansei, the development of new metal substrate architecture reduces the amount of catalyst used and preserves the quality by changing the cell configuration of the metal catalyst substrate and altering the foil surface. That made the prospect of reducing the rare metal usage much brighter.

Estimated amount of Catalyst Reduction	25% ~ 50%
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5 Prevention of Air Pollution - Purification of Vehicle Exhaust Gas

Trends for Diesel Exhaust Gas Regulations

Exhaust gas regulations have become more stringent due to the introduction of the new long-term exhaust gas regulations introduced in October 2005.

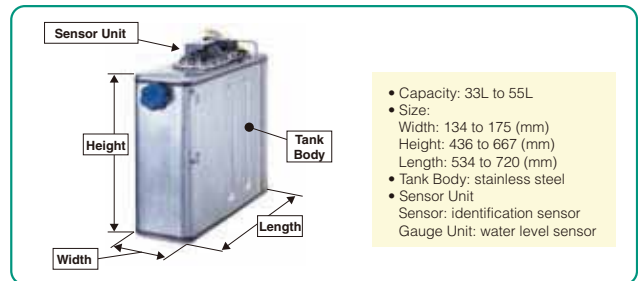
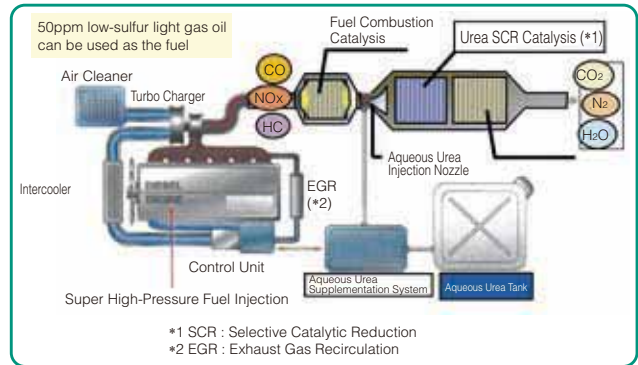
Aqueous Urea Tank

Urea SCR Catalytic System

The nitrogen oxide (NOx) included in exhaust gas has properties that make it easily occur in high temperature and complete combustion conditions. By combining this NOx with aqueous urea, it can be broken down into harmless water and nitrogen. Urea SCR catalysis utilizes this mechanism to inject aqueous urea during catalysis, and greatly reduce the amount of NOx.

The aqueous urea tank is an important component part that supports the urea SCR catalytic system. As the tank is all stainless steel, it has excellent rustproof properties, along with the EGR cooler and intercooler, and the aluminum fuel tank, this environmentally friendly product has been developed to meet the various needs of our customers.

This is the first time in the world that an aqueous urea tank has been mass-manufactured for vehicle installation. It is also highly durable and corrosion resistant.



6 Noise Prevention - Reducing Noise in Exhaust Parts

By analyzing silencing elements using elemental technology, and combining the various silencing elements whose mechanism could be analyzed, this system realizes high performance silencing.



7 LCA Efforts (Product Environmental Impact Evaluation)

We believe by quantitatively evaluating and understanding the environmental impact of products, we will be able to take suitable environmental measures by deciding the appropriateness of product plans and whether development plans are required, and setting environmentally based priorities in the design and development and manufacturing processes of products at all of our manufacturing plants, and have entered this information in a database as LCA figures for self manufactured products.

The LCA figures are also calculated by selecting the target vehicle type product.

In 2006, we started inspecting the operations such as LCA index to assess product development from an environmental side and orienting the "WG Product Environmental Index" inspection of operations. In 2007, we built a CO₂ emissions computing system for our products during the production step.