

Intercooler

Heat exchanger boosting air-charged engines



Role & Operation

The intercooler significantly improves the combustion process in turbo-charged systems, thus increasing the engine power effect.

The main role of the intercooler is to reduce the temperature of the hot air compressed by the turbocharger, before it reaches the engine's combustion chamber. This has a significant impact on the charge effect, as the cooled air has a much higher density in terms of air molecules per cubic centimeter. This increases the volume of intake air, resulting in a far better engine output.



Possible Designs

- Plastic tanks, aluminum core
- Full aluminum construction
- Water-cooled charge-air cooler



Important to know

- A malfunctioning intercooler causes an engine efficiency drop and can lead to serious damage of the turbocharger, exhaust filters (DPF/FAP) or the entire engine.
- Pay attention to symptoms of a defective or leaking intercooler, such as noticeable drop of engine power, increased fuel consumption or unnatural smoke from the exhaust system.
- Intercoolers must always be replaced after the vehicle's turbocharger has failed and whenever a new turbo is installed. Carbonized oil and metal chips from the damaged turbo may clog the intercooler channels, causing the newly installed turbo to fail.

EXPERIENCE THE DIFFERENCE:



Range & Availability

Competitive range of intercoolers covering the most popular car, van and truck models. Program of more than 520 items covering 1,700 OE numbers and more than 88% of the European car park.



Efficient, Reliable & Safe

Designed and manufactured towards the aftermarket, while thoroughly tested to match OE quality - Nissens intercoolers are submitted to corrosion, vibration, pressure impulse, thermal expansion and thermal performance tests.

Easy-handling packaging and excellent protection against transport damages.

Supreme thermal performance and extended lifespan thanks to a number of special features applied to Nissens intercoolers.



Excellent Cooling Performance

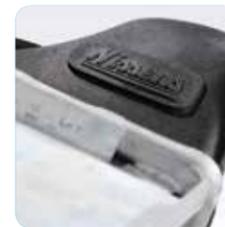
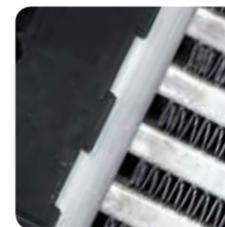
Tubes equipped with turbulators, ensuring better airflow and larger surface to exchange the heat. Compact fin construction with louvres increasing the heat exchange.



Mechanical and Thermal Stress Resistance

Plastic tanks designed with special reinforcing inner crossbars and specially strengthened inlets and outlets, to protect the tank against stress caused by high temperatures and mechanical tensions.

Reinforced with at least 30-35% fiberglass. No recycled plastics are used in the mixture. All Nissens' truck intercoolers are custom-welded, ensuring an exceptionally strong and durable welding seam.



Thermal Stress Resistance

Specially designed side panels with cuts to lower the influence of thermal expansion on the core construction.



Optimized Design

Specially designed core end plates to minimize influence of the mechanical stress and breakdown.



Perfect Finish

Connections and mounting points are designed with a complete fit for the vehicle layout, enabling a firm and easy installation.

