

ENVIRONMENTAL INITIATIVES THROUGHOUT THE PRODUCT LIFE CYCLE

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MANUFACTURING



SALES & SUPPLY



Daikin's efforts to reduce its environmental impact start as early as the manufacturing stage, comprising of:

RESEARCH & DEVELOPMENT

PROCUREMENT

ASSEMBLY

While expanding its sales and supply activities, Daikin is working hard to raise awareness among its affiliates and their customers to help protect and conserve the environment:

SALES ACTIVITIES

LOGISTICS



USE



END OF LIFE

Environmental efforts don't stop once Daikin Europe N.V. has sold its products. Throughout its entire product range, Daikin Europe N.V. shows the same pioneering concern for reducing the global warming impact caused by energy use and potential refrigerant emissions:

RESIDENTIAL

COMMERCIAL

INDUSTRIAL

Proving its concern for the environment, Daikin Europe N.V. is among the first manufacturers in the HVAC-R industry to set up voluntary take-back schemes across Europe:

RECYCLING SCHEMES

MANUFACTURING

DAIKIN'S EFFORTS TO REDUCE ITS ENVIRONMENTAL IMPACT ARE ALREADY EVIDENT IN THE MANUFACTURING STAGE. THESE EFFORTS INCLUDE:

→ RESEARCH & DEVELOPMENT

→ PROCUREMENT

→ ASSEMBLY

→ RESEARCH & DEVELOPMENT

Daikin's environmental efforts start with R&D. These include the optimal selection of components with regard to energy efficiency, specific use of materials, their longevity and recyclability. Testing whether the design specifications correspond to the actual performance of the finished products is also essential. Thorough quality checks are carried out in laboratory conditions as well as in real life conditions.

Ostend has become the heating R&D centre par excellence for Daikin Europe N.V. It is also the location of one of the Daikin Altherma test sites, the 'Daikin Energy Saving House'.

In addition, the integration of German heating systems producer and distributor Rotex strengthened Daikin Europe N.V.'s presence in the heating market. Rotex offerings include solar thermal technology and underfloor heating systems, thus complementing Daikin's range and making possible a total Daikin energy efficient heating package.



➤ The Daikin Energy Saving House real-life environment offers perfect test conditions for Daikin's advanced heat pump technology.

AIR TO WATER HEAT PUMPS FOR RADIATOR APPLICATIONS:

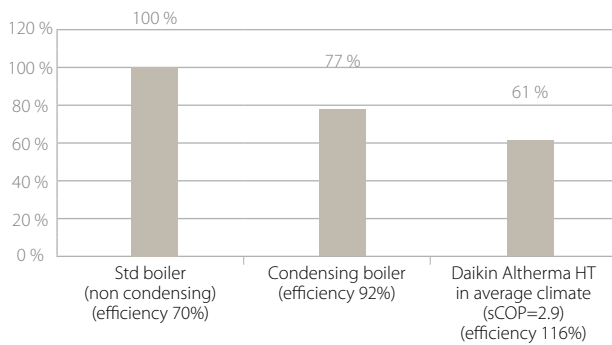
THE DAIKIN ALTHERMA HIGH TEMPERATURE (HT)

In 2007 Daikin Europe N.V. introduced an air to water heat pump for the residential market for connection to floor heating, fan coils or low temperature radiators (the Daikin Altherma Low temperature (LT)). In 2008 Daikin Europe N.V. started the development of an air to water heat pump for high temperature radiators (the Daikin Altherma High temperature (HT)). The Daikin Altherma HT provides energy-efficient heating and domestic hot water to residents of existing homes.

Bart Aspeslagh, co-manager of Daikin Europe N.V.'s Design Department: "After developing the first versions of Daikin Altherma, which are mainly applied in new built houses, we had the strong ambition to develop a top environmental product for the refurbishment market. In old houses radiators are applied, operating at a flow temperature of 60 to 80 °C. By using a cascade technology of 2 refrigerant circuits our Daikin Altherma HT can produce hot water at a temperature up to 80 °C and hence can replace the old boiler and allow to keep the existing radiators. With the inverter technology excellent energy efficiencies can be reached which finally result in lower CO₂ emissions and savings in running costs."



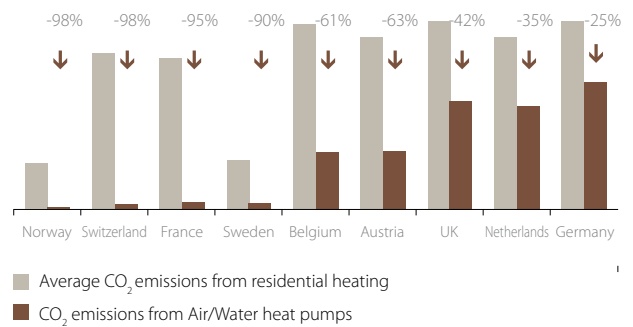
DAIKIN ALTHERMA HT: DRASTIC SAVINGS ON PRIMARY ENERGY USE COMPARED TO CONVENTIONAL BOILERS



■ Primary energy use

➤ Comparison of Daikin Altherma HT (with an SCOP of 2.9), for an average climate (Strasbourg), to conventional boilers. (standard boiler with an efficiency of 70%, condensing boiler with an efficiency of 92%)

DAIKIN ALTHERMA HT: LESSENING OUR IMPACT ON THE ENVIRONMENT BY REDUCING CO₂ EMISSIONS



■ Average CO₂ emissions from residential heating

■ CO₂ emissions from Air/Water heat pumps

➤ Calculations and test results across a number of European countries illustrate Daikin Altherma HT's huge CO₂ saving potential.



➤ The air to water heat pump Daikin Altherma HT uses 100% thermodynamic energy to obtain water temperatures up to 80 °C without using an additional electric heater.

MANUFACTURING

→ PROCUREMENT



A complete supply chain is involved in Daikin's operations, both upstream and downstream of the actual manufacturing. All actors in this supply chain share the same burden of responsibility: to contribute to a more sustainable society. Daikin cannot do it alone; its suppliers must also contribute.

To this end, Daikin has issued Green Procurement Guidelines for its suppliers. These guidelines include:

- > **Striving for ISO 14001 certification**
- > **Legal compliance**
(E.g. Suppliers must not have a record of violations in the past 2 years.)
- > **Chemical substance management**
Restrictions on the use of certain chemical substances (Daikin prohibits the use of 15 substances such as cadmium, lead, asbestos, etc).
Cooperation in the investigation of chemical substances (e.g. REACH)
- > **Packaging guidelines, Eco-consideration design, ...**



➤ Daikin's commitment to manufacture greener products extends to its suppliers via the issuance of Green Procurement Guidelines.

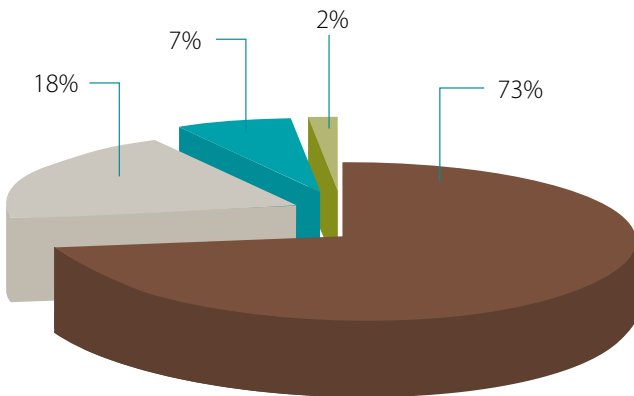


DAIKIN EUROPE N.V. AND DAIKIN INDUSTRIES CZECH REPUBLIC ACHIEVE GOOD RESULTS FOR GREEN PROCUREMENT EVALUATION 2008

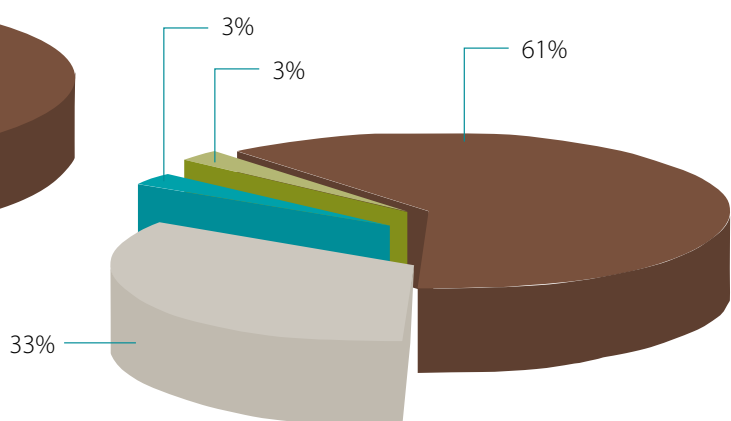
The yearly assessment of green procurement at Daikin Europe N.V. and Daikin Industries Czech Republic shows that over 90 % of the core suppliers of both factories achieve an A or B classification.

- A** CURRENT STATUS GOOD
BUT UNDER CONTINUOUS REVIEW
- B** COLLABORATION WILL CONTINUE,
BUT IMPROVEMENTS ARE NEEDED
- C** NO NEW PROJECTS AWARDED
- D** FURTHER COLLABORATION NOT POSSIBLE

DAIKIN EUROPE N.V.



DAIKIN INDUSTRIES CZECH REPUBLIC



➤ The results of FY 2008 clearly indicate that the majority of Daikin industries Czech Republic and Daikin Europe N.V. core suppliers take the environmental requirements very seriously, even if there is still room for improvement.

MANUFACTURING

→ ASSEMBLY

Each year, Daikin Europe N.V. increases its efforts to minimise its environmental impact in manufacturing and beyond. Daikin Europe N.V.'s efforts aim to further reduce energy and water consumption in production and office areas, contain the refrigerants used and reduce the waste generated from production by effective treatment, reuse and recycling. Excerpts of this successful policy are illustrated on the next page with figures from the Daikin Europe N.V. Ostend plant.

PAINTING LINE IMPROVEMENTS: SAVING ENERGY, WATER AND CHEMICALS

The painting system used in the Ostend factory was redesigned, combining a more environmental approach with higher efficiency.

The yearly savings are impressive:

- > 15% less chemicals required for pre-treatment
- > 15% savings in water, electricity and gas consumption
- > 35% less powder consumption per part

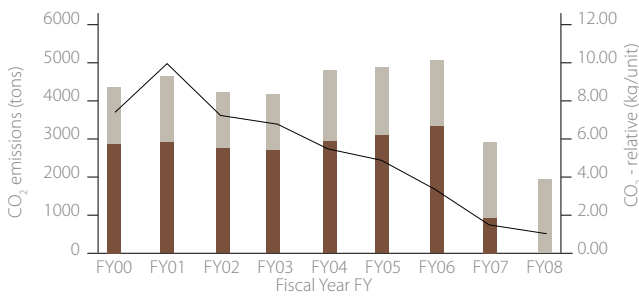




► By opting for 100% renewable energy – from hydraulic power plants in the French Alps – Daikin Europe N.V. took a further step in reducing its CO₂ emission levels and lessening its impact on the environment.

REDUCED CO₂ EMISSIONS

CO₂ emissions

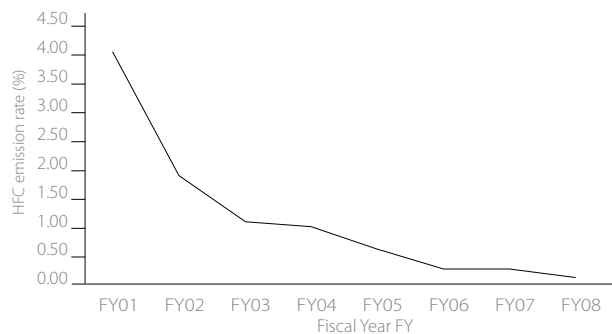


■ CO₂ emission gas (tons)
 ■ CO₂ emission electricity (tons)
 — CO₂ - relative (kg/unit)

► Once again Daikin Europe N.V. succeeded in drastically reducing its CO₂ emission levels per produced unit during FY08. The total abolition of CO₂ emissions caused by electricity use is due to the Green Electricity procurement.

REDUCED HYDROFLUOROCARBON EMISSIONS

Hydrofluorocarbon emission rate

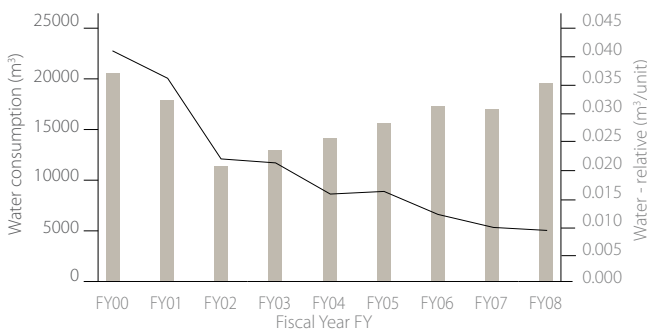


— HFC - relative (% releases/handled volume)

► Daikin Europe N.V.'s refrigerant emission ratio has reached the 0,2 % target set for 2010.

REDUCED WATER CONSUMPTION PER UNIT

Water consumption from production

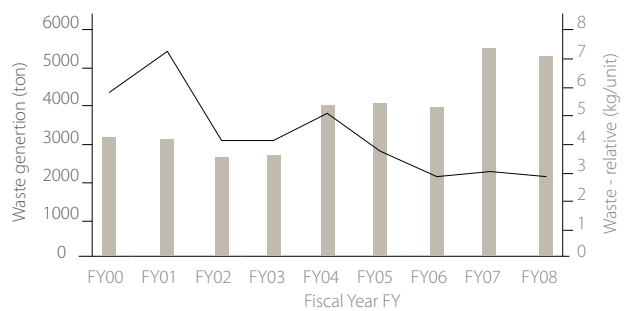


■ Water consumption (m³)
 — Water - relative (m³/unit)

► Thanks to a series of rationalisation measures Daikin Europe N.V. succeeded in further decreasing its water consumption per produced unit in FY2008.

REDUCED WASTE GENERATION PER UNIT

Waste delivered out of site



■ Waste generation (ton)
 — Waste - relative (kg/unit)

► Despite yearly fluctuations, the waste/unit ratio shows a downward trend. The increase in net waste is caused by larger production quantities.