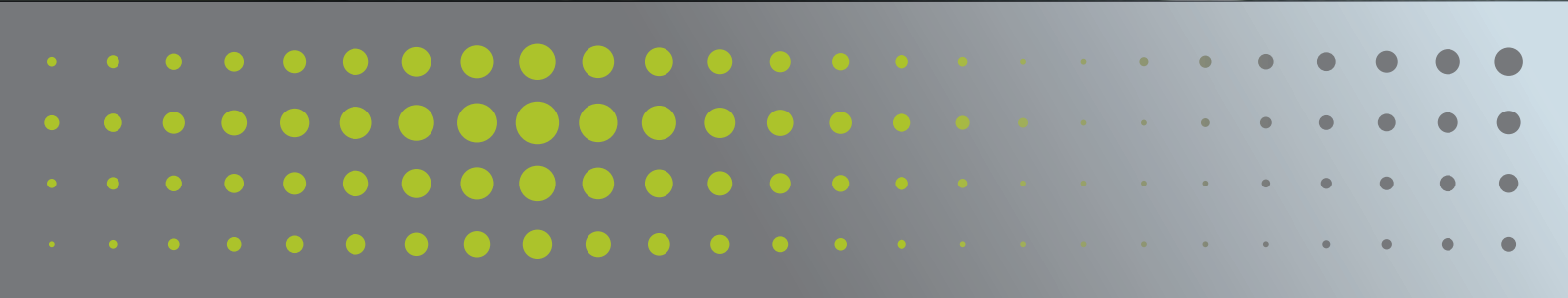




**Sustainability Report 2012**



## Foreword

Autoneum is committed to conserving natural resources. We demonstrate this in the choice of raw material, the optimization of material and energy consumption and the systematic integration of environmental aspects in research and development, production, use and disposal. Our innovative products, technologies and processes help to reduce vehicles' fuel consumption and emissions. Furthermore, we continuously develop lightweight products that help reduce CO<sub>2</sub> emissions – a major issue within the global automotive industry.

In order to follow through on our corporate sustainability commitment, we monitor and collect environmentally relevant data from our plants worldwide and publish the most important data in our Sustainability Report.

This report provides an insight into Autoneum's environmental results achieved in 2012. For instance, we made improvements in the energy efficiency field by introducing a control system which disconnects all machines automatically from the power supply chain as soon as they are no longer in use. Furthermore, Autoneum introduced a new concept for reducing production waste and recycling the remaining residuals back into the production process. Additionally, safety at work is a top priority at our company: regular training sessions are mandatory and internal production audits with a focus on safety are carried out twice a year in our facilities.

It is a continuous improvement process to meet today's corporate social and responsibility issues. We are convinced that we will achieve further significant results within the next years.

Winterthur, September 2013



Martin Hirzel  
CEO Autoneum

Environment,  
health and safety are  
an integral element  
of Autoneum's  
corporate strategy.

## Global Presence of Autoneum



Autoneum   Locations with minority shareholders   Investments in associates   Licensees

### Argentina

– Córdoba

### Belgium

– Genk

### Brazil

– Betim  
– Gravataí  
– São Bernardo do Campo  
– Taubaté

### Canada

– London, Ontario  
– Tillsonburg, Ontario

### China

– Chongqing  
– Shanghai  
– Shenyang  
– Taicang  
– Guangzhou  
– Tianjin  
– Fuzhou

### Czech Republic

– Bor  
– Choceň  
– Hnátnice

### France

– Aubergenville  
– Blainville  
– Dieppe  
– Lachapelle-aux-Pots  
– Moissac  
– Ons-en-Bray

### Germany

– Böblingen  
– Großostheim  
– Munich  
– Roßdorf-Gundernhausen

### Great Britain

– Halesowen  
– Heckmondwike  
– Stoke-on-Trent

### India

– Behror  
– New Delhi

### Indonesia

– Jakarta

### Italy

– Desio  
– Leini  
– Pignataro  
– Santhià  
– Viculungo

### Japan

– Aichi  
– Higashi Kyushu  
– Hiratsuka  
– Hiroshima  
– Ibaraki  
– Tokyo  
– Shizuoka

### Korea

– Daegu

### Malaysia

– Shah Alam

### Mexico

– Hermosillo  
– Silao

### Poland

– Katowice  
– Nowogard

### Portugal

– Setúbal

### Russia

– Ryazan

### South Africa

– Rosslyn  
– Durban

### Spain

– A Rúa  
– Valldoreix

### Sweden

– Göteborg

### Switzerland

– Winterthur (HQ)  
– Sevelen

### Taiwan

– Tao Yuan Hsien

### Thailand

– Rayong  
– Chonburi  
– Samutprakarn

### Turkey

– Bursa  
– Bursa

### USA

– Aiken, South Carolina  
– Bloomsburg, Pennsylvania  
– Farmington Hills, Michigan  
– Oregon, Ohio  
– Chicago Heights, Illinois  
– Jackson, Tennessee  
– Somerset, Kentucky  
– Tinley Park, Illinois  
– Valparaiso, Indiana

## The Company

Autoneum, with headquarters in Winterthur, Switzerland, is the globally leading producer of acoustic and thermal management systems for motor vehicles. The company develops and manufactures components, modules and complete systems for interior and engine bay as well as heatshields and underbody shields. Customers include leading automobile producers in the key markets of Europe, North America, South America and Asia. Autoneum is represented at about 45 locations in over 20 countries and employs more than 9'500 people worldwide, of whom about 5% are in Switzerland. The company is listed since 2011 on the Swiss Stock Exchange.

Autoneum enhances vehicle comfort and value by providing innovative and cost effective noise reduction and heat management solutions. The company's products and solutions are ideally tailored to the needs of its customers and increasingly produced in their own markets. Autoneum aspires to sustainably benefit shareholders, customers and employees by increasing enterprise value. With this in mind, the company seeks to maintain continuous growth in sales and profitability, primarily by organic growth but also through strategic alliances and acquisitions.

### Autoneum's Vision

With its products and services, Autoneum aims to contribute to people's well-being and comfort. Product development therefore focuses primarily on end-user preferences. An interior that is shielded against noise and heat adds to driver and passenger comfort. Autoneum also aims to provide convenience for its immediate customers through products that are easy to handle, maintain and install. To satisfy those needs, Autoneum believes in development through partnerships.

### Autoneum's Values and Principles

The basic values – we perform with passion, we act with accountability, we progress through continuous improvement, we strive for simplicity, we profit from innovation and we live a global spirit – governing the Autoneum Group's business activities are summarized in three overriding principles:

**Delight your customers | Enjoy your work | Fight for profits**

Autoneum measures its success as a company by satisfying customer expectations with employees who are enthusiastic in their commitment and generating long-term added value for its shareholders.

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More information about Autoneum's Principles, Values and Behaviors of Autoneum as well as the company's Code of Conduct can be found at [www.autoneum.com/about-autoneum](http://www.autoneum.com/about-autoneum)

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Autoneum offers a wide range of innovative products and technologies to help automobile manufacturers meet their targets for weight reduction, environmental compatibility, acoustic and thermal insulation.

## Sustainability at Autoneum

As an industrial company operating on a global scale, Autoneum strives to continuously improve the environmental compatibility of its products along the value chain.

Great importance is attached to process innovations that minimize waste and product innovations that improve energy efficiency. Considerations such as environmental compatibility, recyclability and safety are therefore systematically incorporated in all processes and decisions.



## Autoneum's Environmental Strategy

To improve the environmental, health and safety awareness of all Autoneum employees, the company implemented 14 principles for Good Environment, Health and Safety Behavior. Compliance with these rules is verified during regular plant assessments and management meetings.

### Eco-Efficient Products and Designs

Life cycle thinking starts with eco-efficient products and designs and takes priority at Autoneum, especially for product development. This minimizes the environmental impact of Autoneum products throughout their life cycle.

Research and development activities at Autoneum integrate eco-materials into products and reduce component weight in order to minimize vehicle fuel consumption. Autoneum also improves the environmental and energy performance of vehicles by enhancing product aerodynamics.

Furthermore, Autoneum continuously improves its manufacturing processes to reduce overall production energy consumption and waste. For the end of the product life cycle, Autoneum strives to ensure easy recycling and reutilization. Autoneum also aims to raise the environmental awareness of all employees by, for instance, best practice sharing, regular workshops and internal networking sessions.



Autoneum has the ambition to minimize environmental impacts during the life cycle of its products.



Autoneum develops technologies which, for instance, reduce energy consumption or improve recycling procedures.



Autoneum promotes zero-waste technologies.

### Eco-Efficient Technologies

Eco-efficiency is based on the concept of minimizing the energy needed to manufacture products creating less waste as well as reducing the material input required to produce a particular component. Autoneum's efforts towards eco-efficient technologies focus on reducing energy consumption in manufacturing, utilizing secondary raw materials wherever possible and improving recycling processes and procedures.

In addition, technologies invented by Autoneum improve the environmental performance of vehicles. One example is the engine encapsulation system, which has the capability to retain heat while the engine is not running and thereby facilitate energy savings in subsequent restarts. Based on its unique combination of know-how in acoustic and thermal management, Autoneum integrated a function into the encapsulation to enhance noise insulation. In addition to heat retention, the encapsulation system thus also helps to reduce exterior noise emitted by vehicles.

Another example are damping materials: they reduce noise in the interior of the car by weakening or eliminating vibrations that are transferred to its body and cause unpleasant buzzing sounds. At the same time, the light weight of these damping solutions allow them to contribute to lowering fuel consumption and thus also CO<sub>2</sub> emissions.



Efficiency of its production plants is at the core of Autoneum's business interests. Much attention is therefore given to the implementation of Environmental Management Systems certified to ISO 14001.

**10 000 t**

Amount of CO<sub>2</sub> equivalents Autoneum intends to save between 2013 and 2015.

### Eco-Efficient Plants

It is in Autoneum's interest to minimize environmental impact by employing a sustainable product life cycle – from development through production to use of the part and recycling. An important pillar of this cycle is to operate eco-efficient plants. Therefore, Autoneum focuses among other things on optimizing production by standardization and the implementation of processes certified to the environmental management system standard ISO 14001. These measures ensure safe and environmentally friendly production and work facilities.

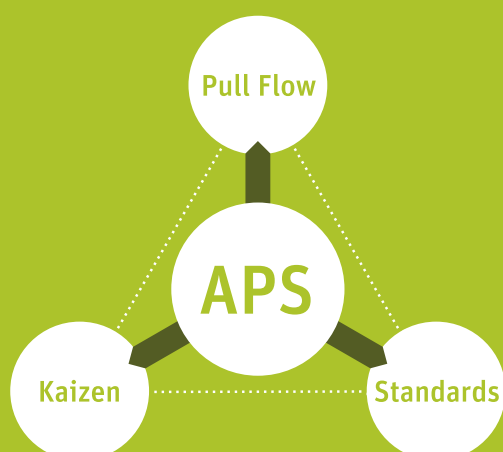
Autoneum is implementing various initiatives to sustainably improve production sites, like the replacement of old equipment with less energy-consuming equipment, new electric lighting concepts, powering off systems during breaks, modification of electrical installations and reducing energy by controlled shutdowns. Furthermore, Autoneum introduced a new concept for reducing production waste and recycling the remaining residuals back into the production process: in two European production sites, between 85% and 100% of thermoplastic felt waste could be reused.

Additional energy saving efforts are either already initiated or planned. With these improvements, Autoneum intends to save more than 10 000 tons of CO<sub>2</sub> equivalents between 2013 and 2015.



## Autoneum Production System (APS)

The Autoneum Production System (APS) includes the values and principles underpinning every activity of the company. This system and its underlying principles apply across the whole organization, focusing on three main pillars:



Autoneum's Production System is based on the three concepts Pull Flow, Kaizen and Standardization.

### **Pull Flow**

Autoneum aims to produce only what customers demand, precisely when they need it and in the exact quantity requested. To reach that goal, the change from a Push-to a Pull-Flow System in its processes is required. Autoneum's strategy is to transform its processes from batch sequences into a visualized and therefore transparent value stream.

### **Kaizen**

A crucial part of Autoneum's culture is to spread a Kaizen mentality among all employees. "Kaizen" (Japanese for "change for the better") refers to a philosophy or practices that focus upon continuous improvement of processes in manufacturing, engineering and business management. Employees participate in Kaizen workshops in order to be competitive in the automotive market via waste elimination through all processes. Autoneum encourages employees to proactively propose improvements.

### **Standardization**

Autoneum employees work in a well-defined way and in a well-organized workplace based on best practices. Standards are very important for achieving similar manufacturing processes and similar quality levels at all manufacturing locations. Autoneum's global manufacturing team focuses on standardizing all processes and continuously analyzing and improving the standards. In order to attain continuous improvement and to ensure adherence to standards, Autoneum holds plant assessments on a semi-annual basis.

### **Certifications and International Cooperation**

Autoneum has a well-established risk control system in place for all plants worldwide. In addition to fire safety and the risk of damage caused by natural hazards and business interruptions, environmental and industrial safety aspects are analyzed in greater depth. The responsible department regularly conducts the relevant audits together with an external partner and initiates necessary actions.

Autoneum strives to certify its 45 production sites worldwide to ISO 14001. Since 2007, Autoneum has been participating in the Carbon Disclosure Project (CDP), an international reporting program for collecting and analyzing corporate greenhouse gas emissions data. Autoneum is also participating in the CDP Supply Chain Program, an effort supported by the automotive sector to evaluate its overall supply chain impact on greenhouse gas emissions.

Data collection is based on key performance indicators. In 2012, Autoneum changed its sustainable data management from the Social, Economic and Environmental Data System (SEED) to the Key Performance Indicator System (KPI): this enables Autoneum to not only collect indicators for sustainability on a monthly basis, but also to record the manufacturing KPIs.

The relevant data used for Autoneum's Sustainability Report refer to energy and water consumption at all locations as well as to waste management, based on the company's recycling projects. The amount of energy is split up into the components which help to calculate the greenhouse gas emissions as well as the acidification potential. These KPIs are required to analyze and control the environmental performance at all plants with standardized reporting of figures. Additionally, the data is used to meet reporting requirements from Autoneum's customers as well as to participate in reporting initiatives like the CDP.

## Autoneum's Environmental Performance

The following section provides the environmental impact of Autoneum's global operations in 2012 and environmental performance data for the following four categories:

- Energy Consumption
- Green House Gas (GHG) Emissions and Acidification Potential
- Water Consumption
- Waste and Recycling

Production output and environmental performance are two closely linked parameters. For a better analysis, this report compares the company's global environmental performance with its worldwide economic performance. In 2012, Autoneum's net sales increased by almost 13.5% compared to the previous year.

# 13.5%

In 2012, Autoneum's net sales increased by almost 13.5% compared to 2011.

CHF million	2012	2011
<b>Net Sales</b>	<b>1'907.7</b>	<b>1'682.4</b>

### Energy Consumption

Autoneum continuously endeavors to improve its performance – in manufacturing, for instance, by reducing energy consumption in the production process. In 2012, several initiatives were taken to lower equipment energy consumption. Also, electrical and light installations were modified to prevent waste of energy. Autoneum has already defined further potential for energy saving improvements and initiated appropriate actions.

In 2012, Autoneum consumed only 1.7% more electricity for production than compared to 2011. This was despite the increase in production, resulting in a substantial growth in corporate output. Furthermore, having kept the company's overall energy consumption in 2012 at the previous year's level may be regarded as a positive achievement.

This report provides key data about the environmental impact of Autoneum's global operations in 2012.

MWh	2012	2011
Electricity	288'046	283'328
Fossil fuels	406'861	410'524
<b>Total Energy Consumption</b>	<b>694'907</b>	<b>693'853</b>

## Greenhouse Gas Emissions and Acidification Potential

Autoneum's greenhouse gas (GHG) emissions are reported in metric tons of CO<sub>2</sub> equivalents. These emissions are either directly produced at Autoneum production sites when burning fuels (scope 1 emissions) or caused in the course of electricity generation by the various energy providers in the countries where the company operated (scope 2 emissions). Compared to 2011, Autoneum managed to save 5% of scope 1 emissions in 2012.

Scope 2 emissions have increased by 6% - related to higher electricity consumption due to higher production. In total, this sums up to a slight increase of 1.4% in GHG emissions.

t (metric)	2012	2011
GHG scope 1 emissions <sup>a)</sup>	92'737	98'061
GHG scope 2 emissions <sup>b)</sup>	150'543	141'819
<b>Total GHG emissions</b>	<b>243'280</b>	<b>239'880</b>

a) The World Resources Institute Greenhouse Gas Protocol and the World Business Council for Sustainable Development define scope 1 emissions as "direct Greenhouse Gas Emissions that occur from sources that are owned or controlled by the company, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment."

b) Similarly, scope 2 emissions are primarily indirect "GHG emissions that result from the generation of purchased electricity that is consumed by the company."

In the evaluation of the Acidification Potential, Autoneum only considers emissions produced directly in its manufacturing facilities. It is reported in metric tons of sulfur dioxide (SO<sub>2</sub> equivalents). Autoneum made very good progress in 2012 and decreased them by more than 42%. This significant change resulted in a reduced usage of certain fossil fuels like butane. Butane has a very high acidification potential and Autoneum therefore replaced it with other products showing significantly lower acidification potential.

t (metric)	2012	2011
<b>Acidification Potential (absolute)</b>	<b>146</b>	<b>255</b>

## Water Consumption

Water is mainly used for cooling, cutting and cleaning purposes at Autoneum's production sites. Some of the newly introduced technologies use steam for production. Using steam causes no water pollution but results in higher water consumption. Thus in 2012, there was an increase in ground water usage which affected the overall consumption, although, at the same time, the consumption of municipal water and water transported in tanks ("Others") has decreased. In total, Autoneum's water consumption rose by 38% in 2012 compared to 2011.

m <sup>3</sup>	2012	2011
Municipal water	815'365	864'236
Ground water	<b>1'889'119</b>	<b>1'064'100</b>
Others	20'128	41'764
<b>Total water consumption</b>	<b>2'724'612</b>	<b>1'970'100</b>

## Waste and Recycling

Waste is an important issue for Autoneum. Thus, the company continually strives to reduce waste by improving production processes and material handling at its facilities. Improvements in recycling systems and the development and deployment of closed-loop systems wherever possible are just some of the options being explored by Autoneum. However, despite the remarkable increase in net sales, there was a slight decrease in total waste generation from 2011 to 2012. Initiatives to further expand the recycling process are already underway.

t (metric)	2012	2011
Municipal waste (disposal)	61'996	66'484
Municipal waste (energy recovery)	12'307	7'759
Recycling	26'357	38'100
Hazardous waste	2'349	963
<b>Total waste</b>	<b>103'009</b>	<b>105'911</b>

Despite the remarkable increase in net sales, there was a slight decrease in total waste generation.

## Eco Design

Ecologically relevant factors are integrated into the product and material development process. Furthermore, energy management, raw material changes, introduction of renewable materials and the integration of multiple functions are an integral part of the product development. As rising fossil fuel prices are increasingly relevant in customers' automobile purchasing decisions, Autoneum's commitment to reduce component weight as well as greenhouse gas emissions through acoustic and thermal management solutions becomes a competitive advantage.

## Product Efficiency and Innovation

Development efforts at Autoneum not only focus on the impact on operations, but also on the overall life cycle efficiency of its products. Therefore, energy efficiency is a core criterion in the development of innovations at the company. The innovative customer-specific products developed by Autoneum not only enhance vehicle comfort: they also reduce vehicle weight and aerodynamic drag to minimize fuel consumption and CO<sub>2</sub> emissions.

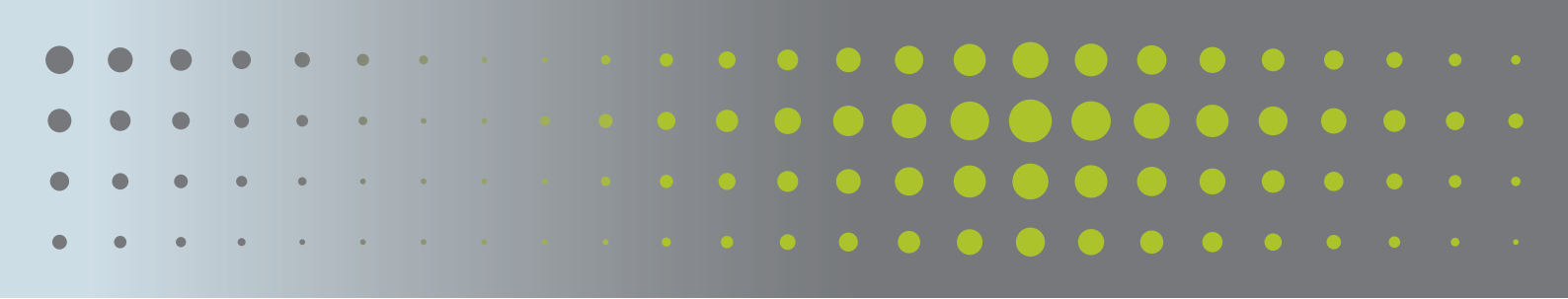
Other ecologically relevant factors such as the choice of even more sustainable raw materials, the introduction of renewable materials and the integration of multiple functions into a product are an integral part of production design at Autoneum. They also play an important role in the product and material development process.

Autoneum will rigorously continue to optimize its products and processes. The company clearly sees the reduction of environmental impact, both in product manufacturing and end use, as an environmental and a competitive advantage at the same time. Autoneum has benefited greatly from this approach and is committed to continuing its philosophy of improvement in the future.



Up to five grams of CO<sub>2</sub> per vehicle and kilometer can be saved with an Autoneum engine encapsulation system.





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