

Special Feature

Konica Minolta's approach to the environment, as seen through our digital multi-function devices.

The world's first multi-function devices to receive the "Blue Angel" mark of approval!

In December 2003, our "DiALTA Di3510" and "DiALTA Di3510f" became the world's first digital multi-functional device certified by Germany's "Blue Angel" environmental labeling system. Digital multi-function devices combine in one unit the functions of two or more devices, such as copiers, printers, scanners and facsimile machines;

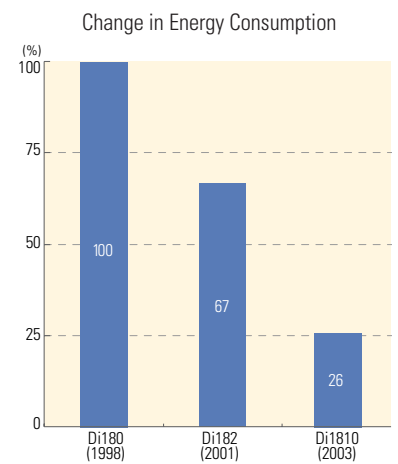
they are growing rapidly in popularity, replacing traditional copiers in the office today. Here we introduce Konica Minolta's environmental efforts with respect to our multi-function devices, which have met the demanding environmental standards of the European marketplace.

Environmental considerations for multi-function devices, and challenges for Konica Minolta

Konica Minolta produces a wide range of products, from single-use cameras to printers and medical imaging devices. As a manufacturer not only of office equipment, but also of optical devices and chemicals, it is vital for Konica Minolta to quantitatively assess the environmental impacts of all of our activities throughout the entire life cycle of our products—from design, through manufacture, distribution, usage, disposal and recycling—and to seek ways to reduce environmental burdens at every stage. For our digital multi-function devices as well, to reduce environmental impacts throughout the product's entire life cycle, we take every possible measure including product assessment at the design and development phases, and "green procurement" of parts and materials.

1 Energy Efficiency during Use

The largest environmental impact of multi-function devices, in terms of CO₂ emissions during their life cycle, occurs during use. At Konica Minolta, in order to reduce CO₂ emissions due to product use, we are developing technologies to enable energy-efficient design. The digital multi-function device "DiALTA Di1810" is the remarkable embodiment of all these efforts. This model uses 74% less energy compared to models of just five years earlier—and it leads the industry as one of the most energy-efficient devices of its kind.



Lead-free materials
Using lead-free solder for the electrical circuit board.



Space-saving design
Our space-saving design achieves efficient use of limited space in the office.



Use of recycled materials
Recycled plastic materials are used for part of the product body.



The use of universal design
Universal design for ease of use by a variety of users is incorporated throughout, as in the adjustable-angle operation panel.

Use of polymerized toner
Manufacturing of polymerized toner consumes 32.4% less energy than the conventional type of toner, reducing CO₂ emissions.



Reused parts
The product body includes reused parts.



Toner recycling mechanism
The imaging unit incorporates a toner recycling mechanism that uses the toner more efficiently and eliminates waste.





Our energy-efficient design has won praise—even in Europe, with its high standards.

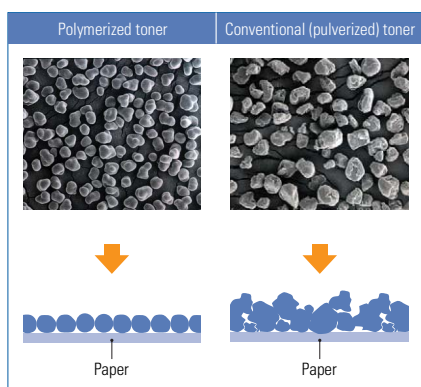
Using energy efficiently is something that everyone should strive for. Just as saving energy in society succeeds when everyone cooperates, the same is true when it comes to developing products. Products are most energy efficient when all the engineers developing various elements work in harmony, including fusing, control system, electrical system, drive mechanisms and printing.



Yoshihiko Sezukuri
Development Division 24,
Imaging Products Development Center 2,
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2 Polymerized Toner

Polymerized toner results in clear and crisp images and fine colors. Making this type of toner involves chemical reactions that ensure that toner particles are consistently fine-grained; it also results in emissions of CO₂, nitrogen oxides and sulfur oxides some 40% lower than previous methods. In printing, toner is heated and fused to the paper by being pressed onto the page as it melts; because polymerized toner grains are so fine, a smaller amount of toner is needed compared with pulverized toner, thus using fewer natural resources. Technology developed through Konica Minolta's chemical manufacturing operations have made this advance possible.



3 Reduction and Phase-Out of Chemicals with Environmental Impacts

The European Union's RoHS Directive prohibits the use of six chemical substances including lead and mercury from July 2006. To respond proactively to these regulations, we are switching to lead-free circuit boards for our multi-function devices, as well as non-brominated flame retardants used in plastic chassis. Another example is chrome-less steel plates, which are used for more than 96% of the sheet metal in our digital color multi-function device 8050. In addition, we are reducing and working toward eliminating the other chemicals with environmental impacts, including switching to halogen-free plastics parts for product chassis.

4 Closed-Loop Recycling Systems

We are promoting a "closed-loop recycling system," in which plastic parts collected from used multi-function devices are remolded for use as parts in new products. By installing a plastic pulverizing equipment, and improving the quality and uniformity of recycled materials, we can now use recycled plastic for exterior parts of products, which until now had rarely used recycled materials.

We require all new products to meet "blue angel" standards

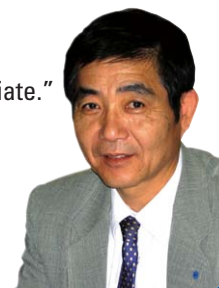
The new "Blue Angel Mark" criteria effective January 2004 for digital multi-function devices includes standards for hazardous substances, emissions, waste minimization, energy efficiency during usage, and the utilization of used products. These criteria, especially the standards for energy consumption, are very strict. In addition, to protect the health of users, standards also limit the total amount of emissions of volatile organic compounds, ozone, and noises. At Konica Minolta, when developing new products we now require all our multi-functional products to meet the Blue Angel standards.



The DiALTA Di3510 model was awarded the "Blue Angel Mark"

"We want to turn technologies into products that customers appreciate."

Hidehito Iwata
Environment Department,
R&D Administration Division
Konica Minolta
Business Technologies, Inc.



Environmental regulations around the world are getting increasingly stringent. To respond, it is essential to reduce environmental impacts at every stage of the life cycle of our products in a seamless fashion. We aim to provide customers with products they will appreciate, by going to great lengths to ensure that our products are environmentally sound, and this includes acting quickly to meet standards recognized around the world such as the Blue Angel program.

■ What is the "Blue Angel Mark"?

The "Blue Angel Mark" introduced in Germany in 1978 as the world's first environmental labeling system, was designed to encourage consumers to choose products and services with low environmental impacts. The Blue Angel Mark is considered the world's most widely recognized environmental label, and most environmental labeling programs around the world are based on it. Since becoming the first to receive the Blue Angel Mark for copiers in 1992, Konica Minolta has received numerous certifications especially for its copiers and printers.



Blue Angel Mark