

Environmental Efforts throughout the Product Life Cycle

Konica Minolta has implemented various measures to reduce environmental impact in all product stages. As an example of these efforts, the color MFP bizhub C652, a Konica Minolta mainstay product, is highlighted below.

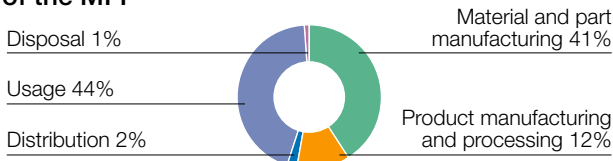
During an MFP's life cycle, the end-user operating stage accounts for a major portion of its total CO₂ emissions.

When copying or printing text and images output by the MFP, heat is necessary to fuse the toner on the paper. The energy required in the fusing process represents a

significant percentage*¹ of the energy utilized by the MFP during the end-user operating stage. As a result, Konica Minolta has focused its efforts on ways to save energy during the fusing process.

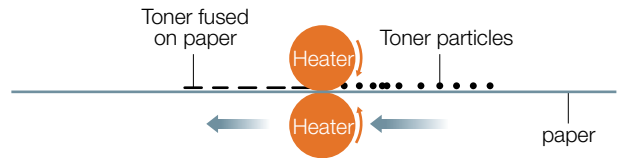
*¹ Represents about 60% of the end-user operating stage energy consumption for the bizhub C652.

Reference: CO₂ Emissions from Life Cycle Stages of the MFP*²



*² Data is for the bizhub 751 black-and-white MFP (75 ppm, letter or A4 size landscape printing), provided by the EcoLeaf Environmental Labeling Program of the Japan-Environmental Management Association for Industry

Fusing Mechanism



Assessment of Product Development

When developing new products, Konica Minolta determines specific environmental standards and only releases products that surpass such standards.

Energy Saving Design

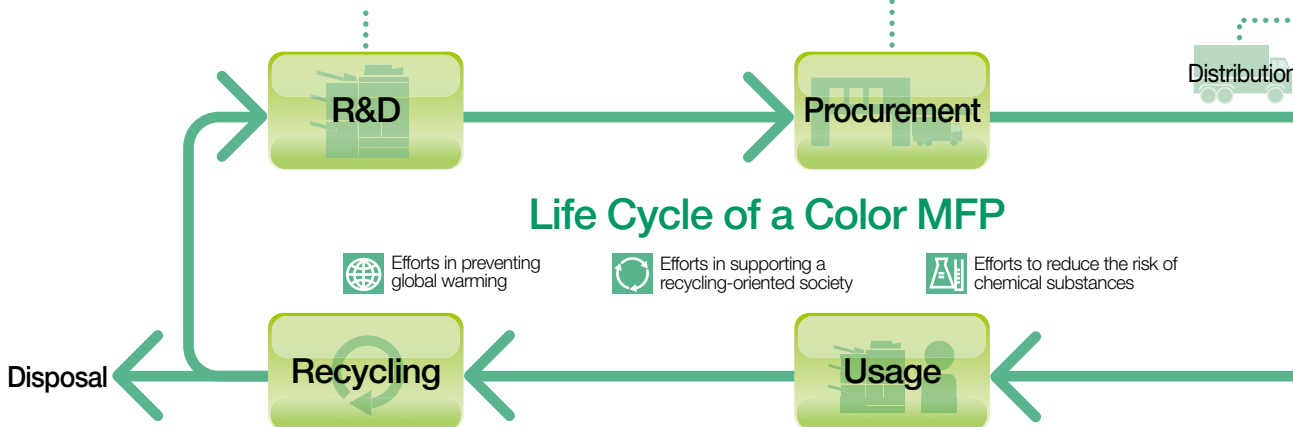
Recyclable Design

Compact and Lightweight with Extended Product Life

Green Procurement

Konica Minolta implements green procurement on a global scale, evaluating the contained chemical substances of parts and materials and giving priority to product purchases with a low environmental impact. (See page 20.)

Life Cycle of a Color MFP

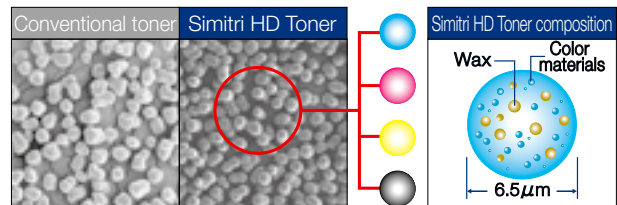


Recovery and Recycling of Used MFPs and Printers

To facilitate the recovery and recycling of used products, Konica Minolta has established systems that meet the regulations and markets of respective countries around the world.

Simitri HD Toner Fuses at a Lower Temperature

Simitri HD Toner is a proprietary polymerized toner developed by Konica Minolta. Polymerization is a method of toner manufacturing that greatly reduces environmental impact during production when compared to conventional toner manufacturing methods. The toner particles are smaller than regular toner particles, so less toner is required for the same print jobs. In addition, the toner is fused at a lower temperature. All of these features contribute to reducing the amount of energy used.



Toner particles of a uniform shape and size are used

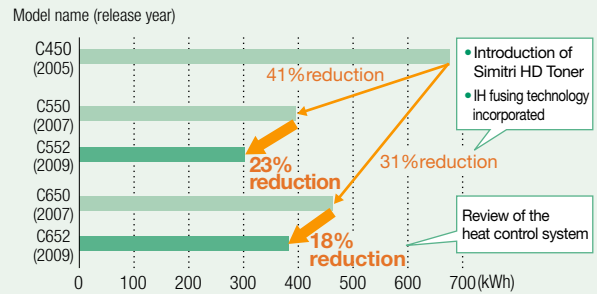
Color MFP bizhub C652



Launched in March 2009, the bizhub C652 (65 ppm black/50 ppm color*) is a high-speed color MFP. The bizhub C552 (55 ppm black/45 ppm color*) was released at the same time. Both models offer high-resolution printing combined with energy-saving performance and have been certified under the International Energy Star program.

* Landscape letter or A4 size

Comparison of Energy-Saving Performance with Previous Models



* Figures were calculated by converting the Typical Electricity Consumption (TEC) value, obtained by the measurement method as stipulated by the International Energy Star Program over a 52-week (one year) period.

Energy Conservation Support Program

Konica Minolta is promoting a program where the Group's experts propose ideas to conserve energy at its production sites around the world. (See page 16.)

Zero Waste Activities

Konica Minolta promotes recycling of waste to minimize landfill disposal while also endeavoring to reduce the total amount of waste. (See page 18.)

Milk Run Logistics (Round collection of cargos)

Konica Minolta uses an efficient transportation method at its production sites in China, which is called "milk run logistics" i.e., assigning a single vehicle to pick up parts from various suppliers instead of requesting each supplier to deliver goods individually.

Promoting a Modal Shift to Alternative Transportation Methods

Konica Minolta has been promoting a modal shift for the long-distance transportation of products and parts, switching from aircraft and trucks to ships, railways and other means that emit less CO₂. (See page 16.)

Improving Distribution Routes and Systems

Konica Minolta is proactively restructuring its logistics facilities around the world. (See page 16.)

Container Round Use

Konica Minolta has established a system for its production sites in Japan to reuse import containers as export containers without returning them empty to shipping companies.

Introducing Eco Cars and Promoting Eco Driving

At its sales offices around the world, Konica Minolta introduces eco cars that emit relatively low amounts of CO₂ and atmospheric pollutants while promoting eco driving to lessen energy consumption.

Using IH Technology to Create an Energy-Efficient Fusing Unit

Before printing can begin, the fusing roller must be heated to a certain temperature. If the standby temperature is kept high, then the roller can be heated quickly to the proper fusing point. However, this means that a significant amount of energy is consumed during the standby mode. Reducing this energy consumption is key to making an energy-saving MFP. Konica Minolta provides a solution with its induction heating (IH) technology. This technology has been applied as the means to rapidly heat the fusing unit of its MFPs^{*3}. By rapidly heating the surface of the fusing roller, a low standby temperature can be quickly increased to printing temperature. This greatly reduces power consumption during standby mode.

*3 Applies to some bizhub MFPs

