



KONICA MINOLTA

Giving Shape to Ideas



Green **ECO** Guide

Technologies and concepts
that minimise environmental impact

Information Green ECO Guide

ECOlogical = ECOnomical

Dear Customer,

Regardless of your personal goals, this green ECO guide presents the general technology and functionality to optimise the environmental footprint and the TCO (total cost of ownership) of your office devices. The core factors are:



Reduction of energy consumption



Reduction of the print volume



Reduction of the paper volume



Avoidance of printout waste

All functions and settings described in this brochure can be applied effortlessly by every user.



Index

➔ Green technologies

MFP development and production.	5
Simitri HD polymerised toner	6
Induction heating (IH) fusing technology	7
Low TEC value	7
Optimal power control	8
Optimised replacement cycles	8
Environmental certificates	8

➔ Green functionality

Duplex printing/copying.	11
N-up functionality.	12
Re-use of one-sided prints	13
Combining print and copy jobs	14
Proof print and copies.	15
Skip blank pages	16
Overlay function.	17
Box for public documents.	18
Share documents by scan or box	19
Fax forwarding	20
Easy set / Job program / My Tab	21
Timer and calendar function	23
Further information	24
Overview green functionality	26



Green **technologies**

➔ **MFP development and production**

All Konica Minolta office devices are developed and manufactured with the objective of continually reducing environmental impact at all stages of the product lifecycle. Konica Minolta's overall goal is to minimise CO₂ emissions, the pollution of air and water and the energy consumption of products, production facilities and transport. In its product development, Konica Minolta determines specific environmental standards and only releases products that surpass these. Konica Minolta's R&D puts a particular focus on:

- **Energy saving design**
- **Recyclable design and components**
- **Compact and lightweight construction
with extended product life**

In addition, Konica Minolta has implemented a Zero Waste Program throughout the worldwide organisation that endeavours to reduce the total amount of waste and promotes recycling of waste to minimise landfill disposal.

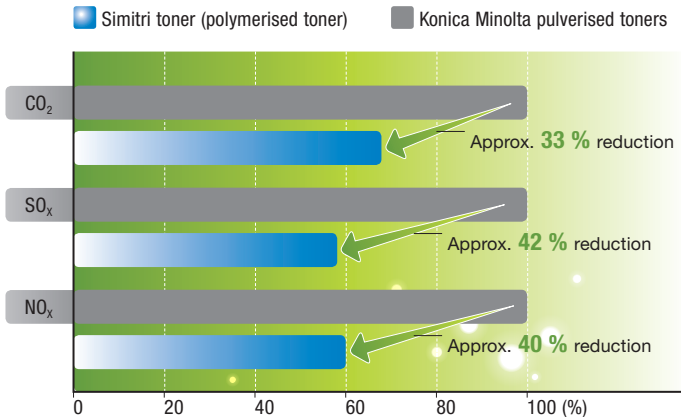




➔ Simitri HD polymerised toner

Konica Minolta's own toner development Simitri HD plays a key role in the energy efficiency of Konica Minolta office equipment. In comparison to conventional toner manufacturing methods, polymerisation greatly reduces environmental impact, generating e.g. 33 % less CO₂ during production. In addition Simitri HD requires a lower fusing temperature. Both aspects contribute greatly to reducing the amount of energy used and the related CO₂ emission. At the same time biomass, which is CO₂-neutral during recycling, is an important ingredient in Simitri HD toner and further reduces the carbon footprint of Simitri HD and the Konica Minolta office devices.

➔ Environmental impact reduction effectiveness



→ Induction heating (IH) fusing technology

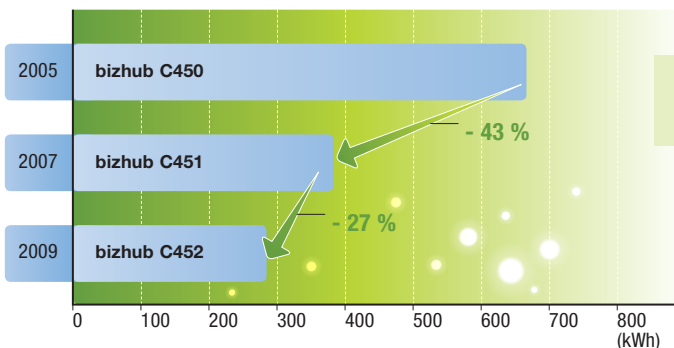
Konica Minolta has adopted IH technology to create an energy-efficient fusing unit. Without IH technology, the standby temperature must be kept high to enable a short warm-up period to the required fusing temperature. This however consumes a significant amount of energy in standby mode.

Warming up the fusing unit by applying induction heating remarkably reduces energy consumption. The required temperature is reached much faster and can be controlled precisely, resulting in minimised energy loss. The short warm-up time enabled by IH technology lets users take maximum advantage of the bizhub systems' different power-saving modes.

→ Low TEC value

With every new product development, Konica Minolta strives not just to comply with the latest environmental regulations but also to remain below the recommended values. An important criterion is the TEC value (Typical Electricity Consumption), which is the basis for the Energy Star certificate. The TEC value represents an electrical product's typical electricity consumption (TEC) within one week with the calculation based on average office use.

→ Annual electrical consumption



Optimal power control

All Konica Minolta office systems have two power saving modes to reduce the energy consumption during idle phases. Both modes start automatically after the programmed time. Considering the fast recovery and short reheating time of Konica Minolta's fusing units, it is recommended to program a short interval for both modes to start in order to optimise the energy saving. From both modes, each device restarts automatically as soon as a user operates a panel key or a print job comes in. Incoming faxes do not restart the machine but are stored in a secure memory until the device is reactivated by another process.

Optimised replacement cycles

In comparison to their predecessors, some latest-generation bizhub products feature separate developing and drum units. This significantly extends the life of the consumables and optimises their replacement cycle. On previous models, the whole imaging unit had to be replaced when the drum unit reached the end of its life, even if the developing unit was still usable. The separate drum unit and developing unit increase energy efficiency, help save resources and reduce the cost of imaging considerably.

Additionally, longer-life consumables increase product efficiency in terms of enhanced yields – more pages can be produced – and reduced service effort. While lowering printing costs as well, this also reduces the carbon footprint related to Konica Minolta products and services.

Environmental certificates

Konica Minolta's ongoing pursuit to meet global standards does not stop with our endeavours for substantial reductions in CO₂ emissions. Konica Minolta complies with environmental laws and regulations throughout the world. Our efforts include the active use of recycled materials and restrictions of hazardous materials for our products.



→ Environmental certificates



Blue Angel Mark

Launched in Germany in 1978 as the world's first environmental labelling system, the Blue Angel Mark is awarded to products and services that have a smaller environmental impact. Since receiving the world's first Blue Angel certification in the field of copiers in January 1992, Konica Minolta has continued to receive certification for new products by clearing the certification bar each time it has been raised.



Energy Star

Products that meet certain standards can be registered as Energy Star devices as part of an energy-saving program for office equipment. Implemented in 1995 through an agreement between the Japanese and US governments, the international program has now expanded with the participation of the EU, Canada, Australia, New Zealand, Taiwan, and other countries.



RoHs

The RoHs Directive (Restriction of use of hazardous substances) has been in effect in the European market since July 2006. Konica Minolta fully commits to RoHs and not only avoids the listed substances in the RoHs-designated products but has discontinued the use of these substances in all office products.

FSC-certified media

For all office systems, Konica Minolta recommends print media certified by the FSC (Forest Stewardship Council) as an indication that paper manufacturers adhere to responsible forest management practices. These paper types only have a minimal environmental footprint in production but do not lack in terms of quality and reliability.

Green **ECO** Guide, Green functionality



Green **functionality**

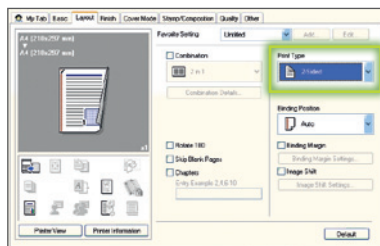
➔ Duplex printing/copying

On most Konica Minolta devices a duplex unit is standard or optional and enables double-sided printing on the fly. As most office documents consist of more than one page, duplex printing saves office space (for storage) as well as postage charges. And of course, duplex printing saves every other sheet of paper. Even though paper seems to be an inexpensive resource in the process of printing and copying, yearly consumption can quickly run into the hundred thousands of sheets. Each device equipped with a duplex unit can be set to default for duplex printing and copying, making manual settings and waste of print media impossible.



Instructions for duplex copying

Press **Copy** on the control panel - select **Basic** - **Duplex/Combine** - select **Copy 2-sided**



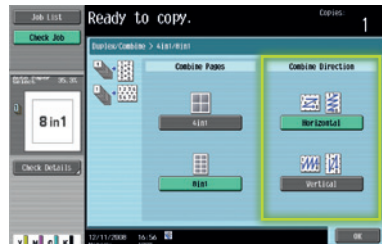
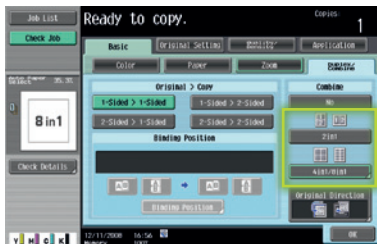
Instructions for duplex printing

Select **Layout** - **Print Type: '2-Sided'**



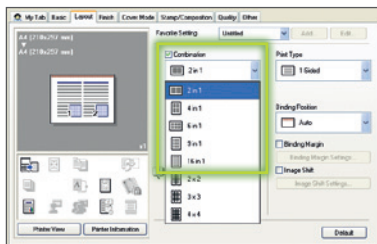
➔ N-up functionality

In the copy or print mode, all Konica Minolta office systems offer the n-up function. It automatically reduces the paper output by positioning a selected number of pages on one sheet. This facilitates economical printing, for example for correction or presentation handouts. Depending on the model, up to 16 pages can be placed on one A4 sheet. In combination with duplex printing, up to 31 pages can be saved.



Instructions for n-up copying

Press **Copy** on the control panel - select **Basic - Duplex/Combine** – choose from **Copy 2in1, 4in1 or 8in1** – select **Combine Direction**



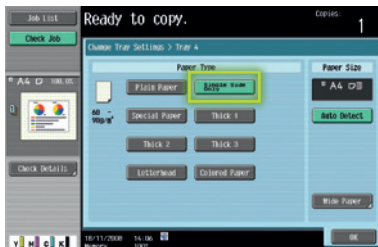
Instructions for n-up printing

Layout - Combination (choose between 2, 4, 6, 9 or 16 pages on a single page)



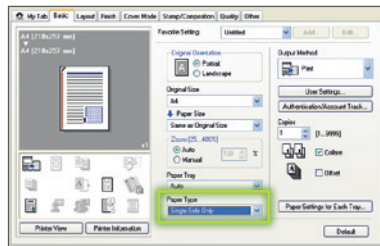
➔ Re-use of one-sided prints

Today, many documents are printed for instant and one-time use, for example e-mail information, web pages etc. These are often single printouts that frequently contain just one page. As most Konica Minolta devices have the capability of duplex printing, they can also process used media and print on the blank side of the page. To prevent used paper from being accidentally chosen for official purposes, one of the paper trays of the printer can be set exclusively for single-sided printing. The re-use of paper helps save considerable resources in everyday business. For some models it is possible to select the single-sided function explicitly.



Instructions for single-sided copying

Press **Copy** on the control panel - **Basic** - **Paper**
- **Paper Size** and touch **Change tray settings** -
select **Single Side Only**



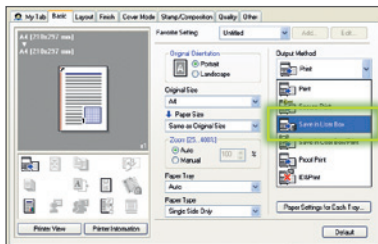
Instructions for single-sided printing

Basic - **Paper Type** - **Single Side Only**



➔ Combining print and copy jobs

Small print and copy jobs cause frequent reheating cycles that are in direct conflict with maximum energy efficiency. It is therefore advantageous to collect print and copy jobs in the personal user box. When convenient, the stored jobs can easily be printed all at once. Another advantage is that all stored data has already been processed, preventing long idle times and permanent reheating between the print jobs.



Instructions for combining print jobs
Basic - Output Method - Save in User Box



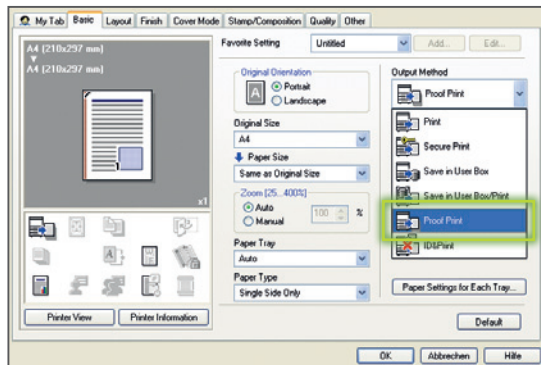
Instructions for printing stored copy and print jobs
Press **User Box** on the control panel – touch the required User Box - **Use/File** - **Print** and select the documents you want to print - select **Combine** and configure the printing order

➔ **Proof print and copies**

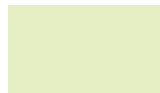
To err is human. But in everyday business even the smallest mistake can cause a huge amount of misprints and copied waste. In multi-set printing or copying (several sets of one document) all devices support a proof function. It only prints the first set, for example of a presentation handout. The author can check this set for mistakes and if okay, the whole job can be produced quickly because the print data has already been processed.



Instructions for proof copy
Simply push the button **Proof Copy** on the MFP panel

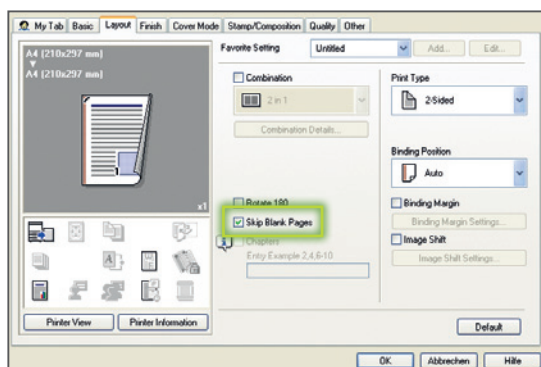


Instructions for proof print jobs
Basic - Output Method - Proof Print



➔ Skip blank pages

Documents often contain blank pages, for example to fill up booklets or to ensure that chapters in a book begin on a right-hand page. To prevent blank pages from being printed and wasting paper, the print controller can be set to delete blank pages from the document automatically.

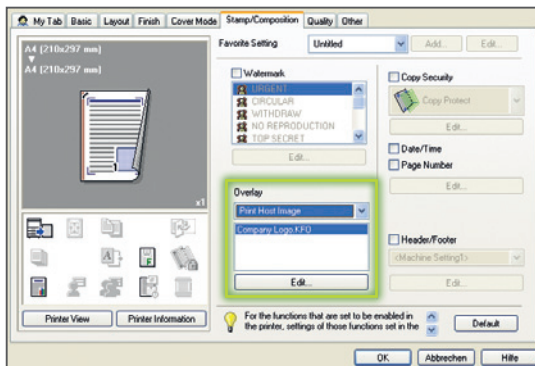


Instructions for skipping blank pages

Layout - tick **Skip Blank Pages**

➔ Overlay function

Usually, preprinted letterhead stationery is used for everyday business correspondence. Besides the company logo, this normally includes details like the address, telephone number, web address and bank account. Any change to this data results in an enormous amount of wasted prints, because it is simply impossible to update preprinted company stationery. Konica Minolta's products offer letterhead printing based on stored overlay files. These files contain all the important corporate information and can be printed automatically on selected pages. If changes occur, only the stored file needs to be updated.



Instructions for overlay function

1. Create an overlay: Create the overlay for example with a word program - select **Stamp/Composition** - **Overlay** - select **Create Host Image** and save the overlay on your computer
2. Print overlay: Select **Stamp/Composition** - **Overlay** - select the needed overlay e.g. "Company Logo.KFO"

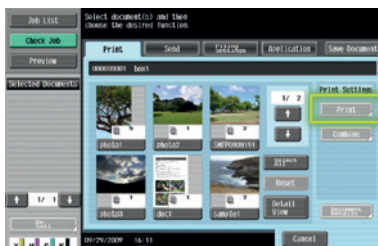
➔ Box for public documents

Besides the company letterhead there are usually other corporate documents that require regular updating, which makes preprinting of this material not advisable. These documents include internal telephone lists, order forms, travel expense charts, and many more. To keep this material up-to-date and ensure that employees always use the latest version, the Konica Minolta devices can store such documents digitally in a public box. This way, data can easily be accessed and printed via the operator panel or online.



Instructions for saving documents in the box for public documents

Press **User Box** on the control panel - select required User Box - press **Save Document**



Instructions for printing saved documents from the box for public documents

Press **User Box** on the control panel - select required User Box - press **Use/File** - select document - press **Print**

➔ Share documents by scan or box

The most ecological way to share information and documents is the digital way. Instead of printing, almost all Konica Minolta products offer the functionality to scan documents and send them directly to multiple destinations – email, FTP, SMB, WebDAV. To prepare a meeting, for example, the required documentation can be distributed by email. Participants can decide for themselves if they prefer to print the documents or to view them on the screen. Most devices even allow such information to be stored in the participant's personal box from where any document can be downloaded as a PDF file or printed right away.



Instructions for sharing documents by scan or box

Press **Fax/Scan** on the control panel – Press **Direct Input** – select destination

➔ Fax forwarding

Even though most information is meanwhile distributed via email, fax is still an important means of communication in everyday business. Usually, incoming fax documents are printed right away without being viewed first. The Konica Minolta office devices allow storing incoming faxes in a user box from where they can be downloaded, printed or forwarded to a specific email address. The TSI number (sender address) even allows faxes to be forwarded to user groups that are selected according to specific senders. This means faxes only need to be printed when really necessary.

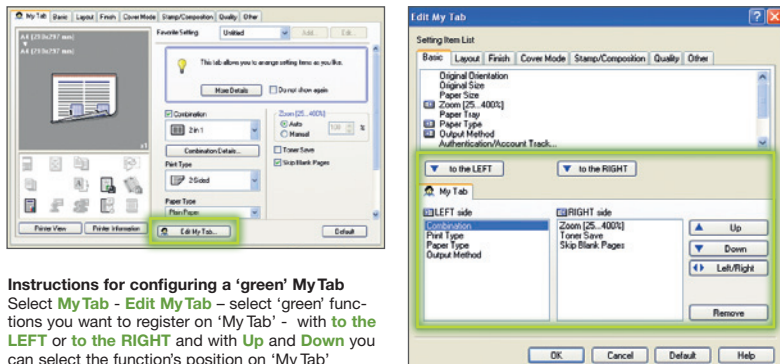


Fax forwarding settings have to be programmed by the administrator

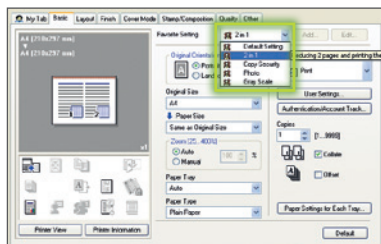
➔ Easy set / Job program / My Tab

To facilitate using the wide range of eco-functions from Konica Minolta, it is possible to preprogram them, integrating helpful and/or eco-friendly functionality into any print, copy, scan and fax process. This preprogramming feature also facilitates operating Konica Minolta office products for untrained users.

The My Tab feature available on most newer office models adds extra operation ease, letting users combine their frequently needed features in a single setting screen. Eco-friendly settings such as duplex or n-up printing can be individually included. My Tab much facilitates operating different devices as it can be called up on any system. Virtually no operator training is necessary, and corporate environments benefit from the minimised learning curve.

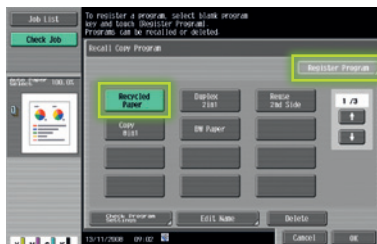


Green ECO Guide, Green functionality



Instructions for 'green printing' with favourite settings

Favourite Setting – e.g. '2 in 1' in order to save paper by printing 2 pages on 1 sheet of paper



Instructions for registering 'green' copy program

Copy settings have to be registered before pressing the **Mode Memory** button - select blank program key - press **Register Program** - enter the registration name - **OK**



➔ Timer and calendar function

To avoid the inadvertent shutdown of a device, Konica Minolta's Low Power and Sleep Modes each have a timer and calendar function that facilitates activating the system on a daily or weekly basis or according to the calendar date. For example, normal business days can be defined with an automatic start and shutdown time. For Sundays or specific dates like Christmas, a total power-off mode can be selected.



Weekly timer settings have to be programmed by the administrator

➔ Always up-to-date

All Konica Minolta environmental activities are part of the general management philosophy called the **Creation of New Value**. This New Value not only includes innovative products with intelligent features, but also refers to the permanent search for new ways of protecting the environment. After all, eco-friendly technology and behaviour is a very dynamic process that must always take into account the latest scientific research.

Konica Minolta regularly publishes information on this important topic. On the website www.konicaminolta.eu/environment, an entire section is dedicated to environmental affairs, offering news on latest developments and providing comprehensive PDF documents for downloading.

Further information

➔ The latest Environmental Report can be found under:
www.konicaminolta.eu/environment





KONICA MINOLTA

Giving Shape to Ideas



{*Agalychnis Callidryas*}

➔ **There are things**
even our best devices could not copy.
That's why we help to save them.

Konica Minolta products make it easy to consider the environment.

On the one hand, the procurement and the production of our devices and consumables is based on strictly eco-friendly standards. On the other hand, the everyday operation of our multifunctional printers contributes to an extensive saving of energy and resources.

There's only one world. We know it takes a great deal of effort to keep it a friendly place.

→ Green functionality bizhub devices

bizhub device	20P	40P	C35P	C353P	20	164	Konica Minolta 240f	43	C25	C35	C220 C280 C360	C452 C552 C652/ DS	223 283 363 423	552 652	501 601 751
Duplex copy/print	x*	o*	x*	x*	x	/	x	x	x	x	x	x	x	x	x
N-up functionality	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Re-use of one-sided prints	x	o	x	x	x	/	x	x	x	x	x	x	x	x	x
Combining print & copy jobs	/	/	/	o*	/	/	x*	x*	/	/	x	x	x	x	o
Proof print & copies	/	o	o	x	/	/	/	/	o*	x	x	x	x	x	x
Skip blank pages	/	x	x	x	/	/	/	/	x	x	x	x	x	x	x
Overlay function	/	o	x	x	/	/	/	x	x	x	x	x	x	x	x
Box for public documents	/	/	/	o	/	/	x	/	/	/	x	x	x	x	x
Share documents by scan or box	/	/	/	o*	x	/	x	x	/	/	x	x	x	x	x
Fax forwarding	/	/	/	/	x	/	x	x	x	x	x	x	x	x	x
Easy set/ Job program	/	x	x	x	/	x	x	x	x	x	x	x	x	x	x
My Tab	/	/	x	/	/	/	/	/	/	x	x	x	x	x	x
Timer and calendar function	/	/	/	/	/	/	/	/	/	/	x	x	x	x	x

x = standard o = option / = not available * = for print only



→ Green functionality pagepro/magicolor devices

pagepro/ magicolor device	pp 4650EN pp 5650EN	mc 1600W mc 1650EN	mc 3730DN	mc 4750EN mc 4750DN	mc 5670EN	mc 7450II	mc 8650DN	pp 1480MF pp 1490MF	mc 1680MF mc 1690MF	mc 4690MF mc 4695MF
Duplex copy/print	o*	o* (only for 1650EN)	x*	x* (only for 4750DN)	o*	o*	x*	/	o (only for 1690MF)	x
N-up functionality	x	x	x	x	x	x	x	x	x	x
Re-use of one-sided prints	o	o (only for 1650EN)	x	x (only for 4750DN)	o	o	x	/	o (only for 1690MF)	x
Combining print & copy jobs	/	/	/	/	/	/	o*	/	/	/
Proof print & copies	o*	/	/	o*	o*	o*	x*	/	/	o*
Skip blank pages	x	x (only for 1650EN)	/	x	x	x	x	/	/	x
Overlay function	o	x	x	x	x	x	x	x	x	x
Box for public documents	/	/	/	/	/	/	o	/	/	/
Share documents by scan or box	/	/	/	/	/	/	o*	/	x (only for 1690MF)	/
Fax forwarding	/	/	/	/	/	/	/	x (only for 1490MF)	x	x
Easy set/ Job program	x	x	x	x	x	x	x	x	x	x
My Tab	/	/	/	x	/	/	/	/	/	/
Timer and calendar function	/	/	/	/	/	/	/	/	/	/

x = standard o = option / = not available * = for print only



KONICA MINOLTA



Sheltering
our planet

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