




# Blue Angel Environmental Information and Data Sheet

## Model: IM 460F

EDP: 423508

Issued: October 5<sup>th</sup> 2023

1 General Specification	
<b>Primary functions of the base unit</b>	
Model : IM 460F	<input checked="" type="checkbox"/> Copy <input checked="" type="checkbox"/> Print <input checked="" type="checkbox"/> Fax <input checked="" type="checkbox"/> Scan
Technology	<input checked="" type="checkbox"/> Monochrome <input type="checkbox"/> Colour
	<input checked="" type="checkbox"/> Electrophotographic <input type="checkbox"/> Inkjet Technology
Print Speed Simplex, DIN-A4 pages/min, according to ISO/IEC 24734	Monochrome: 46    Colour: NA
Copying Speed Simplex, DIN-A4 pages/min, according to ISO/IEC 24735	Monochrome: 46    Colour: NA
The system is designed for use in the professional/commercial sector.	
2 Technical Safety (Declaration of Conformity)	
The system complies with the following EU regulations as far as they are applicable and bears the CE mark	
<ul style="list-style-type: none"> <li>• Radio Equipment Directive 2014/53/EU</li> <li>• RoHS Directive 2011/65/EU</li> <li>• ErP Directive 2009/125/EC</li> </ul>	
3 Environmental Labels	
 <p><a href="http://www.blauer-engel.de/uz219">www.blauer-engel.de/uz219</a></p> <ul style="list-style-type: none"> <li>• geringer Energieverbrauch</li> <li>• emissions- und lärmarm</li> <li>• langlebig</li> </ul>	
<p>The TEC value of the product based on the ENERGY STAR® Version 3.0/3.1/3.2 Test Method, and tested by the manufacturer, satisfies the program requirements.</p> <p>The requirements of the Blue Angel DE-UZ 219 eco-label were tested and met with the toner supplied and recommended by Ricoh. Further information on the Blue Angel can be found at: <a href="https://www.blauer-engel.de/en">https://www.blauer-engel.de/en</a></p>	
4 Use and labelling of materials	
Paper	The device is suitable for processing recycled paper that complies with EN 12281:2002. We recommend using the machine in duplex mode (double-sided copy/print). The model is equipped with a duplex and N-up function: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Optional
Toner/ Ink	<input checked="" type="checkbox"/> Toner <input type="checkbox"/> Ink
Ames-Test	Negative (refer to Safety Data Sheet)
Photo Conductor Unit	Organic Photo Conductor (OPC)
Batteries	Mangandioxide Lithium free of lead, cadmium and mercury
Flame Retardants	No halogenated flame retardants are used in housing parts and other plastic parts over 25 g, especially not: <ul style="list-style-type: none"> <li>• Polybrominated Biphenyles (PBB),</li> <li>• Polybrominated Biphenylether (PBDE) and</li> <li>• Tetrabrombisphenol A (TBBPA).</li> </ul>

<b>Marking of Plastic Parts</b>	All plastic parts >25g are marked in accordance with ISO 11469:2000 and ISO 1043.			
<b>Proportion by weight of recycled plastic relative to total plastic (Post-consumer)</b>	<input type="checkbox"/> 0 – 1 % <input type="checkbox"/> 1 – 5 % <input type="checkbox"/> 5 – 10 %	<input type="checkbox"/> 10 – 15 % <input checked="" type="checkbox"/> 15 – 20 % <input type="checkbox"/> 20 – 25 %		
<b>Legal requirements for recycling (WEEE)</b>	The device fully complies with WEEE requirements.			
<b>5 Yield of consumables</b>				
<b>Consumable</b>	<b>Description</b>	<b>EDP</b>	<b>Yield (A4)</b>	<b>Test Procedure</b>
<b>Toner Cartridges</b>	Print Cartridge IM 460	842610	15,400	A4, 6% Coverage
<p><b>Note on the ranges given here:</b> The actual yield depends on the image size and brightness, the number of pages to be printed at one time, the type and size of paper used, the contents of the printed images, and environmental conditions such as temperature and humidity. Refer to the system's Operation Guide for more information on run times and the change intervals of consumables.</p> <p><b>Note on handling the toner containers:</b> Do not open the toner containers. When replacing them, please follow the instructions in the operating manual. Do not inhale any leaking toner as a result of improper handling, but wipe it off with a damp cloth. Avoid skin contact. If toner gets onto the skin, wash affected areas with plenty of cold water and soap.  <b>Keep toner (old or new) out of the reach of children!</b></p>				
<b>6 Warranty and spare parts</b>				
The guarantee for the devices corresponds to the legal regulations, as far as these are binding. All Ricoh distributors and subsidiaries offer all-in service contracts that go beyond the legal warranty. Please contact your local Ricoh office or distributor. Consumables and essential spare parts are available at least 5 years after the last unit in this series was sold.				
<b>7 Cleaning and Maintenance</b>				
Cleaning, maintenance and disposal activities may only be carried out by qualified personnel. Further information on cleaning and maintenance of the system can be found in the chapter "Maintenance and Specification" of the operating instructions.				
<b>8 Power Consumption</b>		Determined according to DE UZ 219 and ENERGY STAR® in delivery condition		
<b>Operating Mode</b>	<b>Default Delay Time</b>	<b>Return Time<sup>2)</sup>(s)</b>	<b>Power Consumption (Watt)</b>	
<b>Maximum Power Consumption</b>			1780	
<b>Continuous Operation 46 ppm (15 min. printing time) monochrom</b>			659	
<b>Ready</b>	0	0	26.4	
<b>Sleep Mode</b> 	1 or Energy Save Button	7	0.5	
<b>Off Mode</b> 	Switch		< 0.1	
<b>TEC (Typical Electricity Consumption) based on ENERGY STAR® 3.0/3.1/3.2 test method</b>			<b>0.49 kWh/week</b>	
<p>1) <i>Default Delay Time:</i> The time that elapses after the end of the printing process until the device automatically switches to an idle state.                  2) <i>Return Time:</i> The time it takes for the device to return from an energy-saving state to a print-ready state.</p>				

This product is designed to save energy costs. The system automatically reduces energy consumption when not used for a period of time (1 minute). This mode is called Sleep Mode. From these states, the machine returns to standby printing in a short time (the return time listed above) when it receives a print or copy job. This allows you to save energy without limiting your productivity. With its return time, the system meets the high requirements of the Blue Angel, which attaches particular importance to user-friendliness in this respect.

The activation times for the sleep mode can be changed by the user in the range 1-60 minutes. However, if the activation times are increased, this leads to higher energy consumption and thus to higher electricity costs. It is therefore recommended not to change the preset activation times.

When the main switch is actuated, there is still a low power consumption of max. 0.1 watts. Complete disconnection from the mains can be achieved by pulling the mains plug. Please observe the instructions in the operating instructions in order to prevent damage to the system and possible loss of data.

The device is designed so that it can be switched off at least twice a day.

**Note on TEC (Typical Electricity Consumption).** The aim of the TEC method is to determine the energy efficiency of hardcopy devices (copiers, printers, multifunction systems) and to make them comparable. The method determines the energy consumption of a product over a fixed period of time under normal operating conditions.

**The following usage cycle is assumed for the present system:**  
Per working day 32 print jobs with 33 pages, simplex at monochrome printing, ( 1056 pages/day).  
Hence, the energy consumption for a week in standard usage cycle according to ENER-GY STAR® (7-day-week with 5 working days of 8 hours) is 0.49 kWh per week.

9 Noise Emissions					
9.1 According to DE-UZ 219 clause 3.5 printing mode					
Declared Sound Power Level (L <sub>WAc</sub> in dB(A) )BW		67.3			
9.2 According to ISO 7779 in combination with ISO 9296					
		Standby	Operation Monochr.	Operation Col.	
Sound Power Level (L <sub>WA</sub> in dB(A) )		16.5	63.8	NA	
Declared Sound Power Level (L <sub>WAd</sub> in B(A)		2,0	6,7	n.a.	
Sound pressure level operator position (L <sub>pA</sub> in dB(A) )		4.3	56.1	NA	
Sound pressure level bystander position (L <sub>pA</sub> in dB(A) )		3,5	54,4	n.a.	
10 Chemical emissions determined according to ISO/IEC 28360 with DE-UZ 219					
		Monochrome		Full Colour	
		Measured Value	Reference value DE-UZ 219 (Blue Angel Mark)	Measured Value	Reference value DE-UZ 219 (Blue Angel Mark)
Pre-Operating Phase	TVOC [mg/h]	0.044	2	NA	2
Printing Phase (Sum of Printing and Pre-operating phase)	TVOC [mg/h]	0.85	10	NA	18
	Benzene [mg/h]	0.014	< 0,05	NA	< 0,05
	Styrene [mg/h]	0.019	1,0	NA	1,8
	Non identified VOC [mg/h]	0.0022	0,9	NA	0,9
	Ozone [mg/h]	0.074	1,5	NA	3,0
	Dust [mg/h]	<0.19	4,0	NA	4,0
Printing Phase	PER10 PW [Partikel/10min]	0.34 * 10 <sup>11</sup>	From 1/1/2023: 3,0*10 <sup>11</sup> From 1/1/2025: 2,5 *10 <sup>11</sup>	NA * 10 <sup>11</sup>	From 1/1/2023: 3,0*10 <sup>11</sup> From 1/1/2025: 2,5 *10 <sup>11</sup>

LOD = Limit of detection, LOQ = Limit of qualification  
 Blue Angel recommendation: New electronic devices generally emit volatile substances into the room air. For this reason, sufficient air exchange in the installation rooms and, if necessary, at the workplace should be ensured, especially in the first few days after the unit has been installed.  
 The system is equipped with an ozone filter: Yes:  Not applicable:   
 The system is equipped with dust filters: Yes:  Not applicable:   
 Further information on the filter change cycle can be found in the operating instructions..

11 Recycling	
<b>Empty toner cartridges</b>	<input checked="" type="checkbox"/> Collection via Ricoh Resource Smart Return Program
<b>Full toner cartridges</b>	Filled waste toner containers should not be disposed of with household and commercial waste. They can be handed in at any RICOH branch and at any RICOH contractual partner.
<b>Waste Toner</b>	<input type="checkbox"/> Not applicable. <input checked="" type="checkbox"/> Please dispose according to local legislation
<b>Batteries</b>	<input checked="" type="checkbox"/> Collection according to local legislation. <input type="checkbox"/> No battery used.
<b>Photo Conductor units and spare parts</b>	<input checked="" type="checkbox"/> Return via Ricoh Resource Smart Return Program
<b>Devices</b>	Used equipment is taken back and recycled in an environmentally friendly manner or - if this is no longer possible - recycled. Information about collection points for used RICOH products in your country can be obtained from your dealers or via the RICOH website: Contact: <a href="https://www.ricoh-europe.com">https://www.ricoh-europe.com</a>
Information on Ricoh's pan-European consumables collection system can be found on the following website: <a href="https://www.ricoh-return.com">https://www.ricoh-return.com</a>	
12 Other	
All information in this data sheet is based on the current state of our knowledge. They do not represent any assurance of the properties of the product described within the meaning of the statutory warranty regulations.	

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