



**Environmental criteria for sustainable public
procurement of**

Reproduction Equipment

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1. Scope/definition

The Reproduction Equipment product group comprises equipment for use in an office environment. This product group comprises printers (black and white and colour equipment), photocopiers, faxes and multifunctional equipment, including electronic equipment, that combines at least two functions (printing, copying, faxing or scanning).

Large-format printers (that is to say, 40-100 cm printing width) also fall within the scope of this criteria document. It should, however, be stated that the criteria linked to double-sided printing do not apply to large format printers.

The following products (with their corresponding CPV codes) are part of the Reproduction Equipment product group. This list of products is not intended to be exhaustive.

Products	CPV code
Photocopying and thermocopying equipment	30121000-3
Photocopiers	30121100-4
Photocopying equipment	30121200-5
Reproduction equipment	30121300-6
Parts and accessories of photocopying apparatus	30125000-1
Printers and plotters	30232100-5
Fax equipment	32581200-1

Excluded from the scope of this product group are:

- franking machines and scanners

2. Most significant environmental effects

The following tables list the sustainability themes and describe the approach to each theme for the Reproduction Equipment product group. The “Approach” column presents a statement indicating the influence of sustainable purchasing and its criteria on the “sustainability” of the theme. This column also includes a reference to any requirements, award criteria or points of attention/suggestions that may be useful in implementing the approach. The product group can also have an impact on other environmental themes, but these are (at least at present) less relevant or of a much less significant level of concern, or do not as yet have a suitable set of standard criteria.

Themes:	Approach:	No. of requirement/ Criterion
<p>Energy and climate Energy consumption of reproduction equipment in the use phase, with corresponding CO₂ emissions</p>	<ul style="list-style-type: none"> • Use energy-efficient models 	ME1, GC1, GC3
	<ul style="list-style-type: none"> • Use equipment that allows energy-efficient printing 	ME4
	<ul style="list-style-type: none"> • Coordinate choice of equipment with copy and/or printing needs 	AS2, AS3, AS5

<p>Supplies and Raw materials Paper and ink consumption in use phase of the equipment</p> <p>Lifetime of the equipment</p> <p>Waste production in the use phase</p> <p>Critical materials in the equipment</p>	⇒	<ul style="list-style-type: none"> Use equipment that prints with the minimum possible material 	ME2, ME3, ME4, GC4
		<ul style="list-style-type: none"> Use equipment with long lifetime and guarantee period 	ME5
		<ul style="list-style-type: none"> Use equipment that allows local confirmation of print job before output 	ME6
		<ul style="list-style-type: none"> Use equipment without flame-retardant substances or preparations 	GC2
		<ul style="list-style-type: none"> Coordinate choice of equipment with copy and/or printing needs 	AS1, AS3, AS4
		<ul style="list-style-type: none"> Purchase used/refurbished equipment 	AS6
		<ul style="list-style-type: none"> Use equipment without flame-retardant substances or preparations 	GC2
<p>Health and welfare Use of hazardous substances in production of equipment</p>	⇒	<ul style="list-style-type: none"> Use equipment without flame-retardant substances or preparations 	GC2

3. Points of attention/suggestions

Devoting attention to the opportunities and possibilities for the most sustainable procurement possible in the preparation phase will lead to specifications that are more ambitious or of different types than the standard minimum requirements and award criteria set out in this document. The following table presents points for attention and suggestions for promoting sustainability in procurement within this product group.

No.	Points of attention/suggestions (AS)
AS1	<p>Analyse print and reproduction needs Complete a thorough analysis of the organisation's printing and copying needs ahead of time. This requires insight into the relevant figures, such as the use of paper and toner over a specific period of time. These figures can be collected within the context of internal environmental practices, for example, or collection can be outsourced to the supplier as part of maintenance.</p>
AS2	<p>Choose machine that best meets the copying and/or printing requirements The choice of the type of copier/printer in general is determined on the basis of the number of copies/prints made (the copy volume). Heavy equipment uses considerably more energy than a medium-volume machine. The installation of heavy equipment in areas with a relatively low copy volume therefore wastes energy. Equipment that is too light is not appropriate either. Using a machine to make more copies than it was designed for can result in greater wear and tear, increased repairs and premature replacement.</p>
AS3	<p>Choose central copying/printing By choosing a central copying/printing location, it is possible to reduce the number of machines. This reduces the raw materials and waste (including toner cartridges). A large machine that is used by various users in general uses less energy than many smaller machines combined.</p>
AS4	<p>Choose printers with different trays for different types of paper Printers with more than one tray make it possible to match the choice of paper to the purpose of the</p>

	printed document (filing or not, thicker paper or not, etc.). This makes it possible to always make the most environmentally friendly choice. This also ensures that incorrect printing is avoided, for example, by having separate trays for blank paper and letterhead paper.
AS5	Choose multifunctional (digital) devices A multifunctional device (MFD) or an "all-in-one device" uses approximately 50% less energy than a separate printer, scanner, fax machine and copier. This can also result in cost savings.
AS6	Choose used equipment Check to see if it is possible to procure refurbished equipment (provided it meets the specified energy criteria). Actual practice shows that this type of equipment is not inferior in terms of quality and does not require more maintenance than new equipment.

4. Selection criteria

Not defined for this product group.

5. Technical specifications

No.	Technical specifications (ME)
ME1	<p>Energy efficiency of operating mode</p> <p>The energy consumption of the product in operating mode must at least meet the energy efficiency requirements of the Energy Star v.2.0 criteria for image processing equipment. The energy consumption must be measured in accordance with the Test Method for Determining Imaging Equipment Energy Use Version 2.0 – Final May-2012 or equivalent method.</p> <p><i>Verification</i></p> <p>The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. Products with a relevant type 1 environmental label that meet the specified requirements, and products that have the Energy Star v.2.0 quality mark (or, if applicable, a more recent version) are assumed to be in compliance. A technical file from the manufacturer or a test report showing that the products meet these criteria will also be accepted.</p> <p><i>Source EU GPP</i></p>
ME2	<p><i>(Only applicable to image processing equipment that can achieve a print/copying speed of 25 images per minute (monochromatic) or more in A4 format)</i></p> <p>Double-sided printing</p> <p>The image processing equipment must be equipped with an automatic double-sided printing/copying unit. The duplex print/copy function must be configured as standard in the manufacturer's original, official software</p> <p><i>Verification</i></p> <p>The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. Products with a relevant type 1 environmental label that meet the specified requirements, and products that have the Energy Star v.2.0 quality mark (or, if applicable, a more recent version) are assumed to be in compliance. A manufacturer declaration indicating that these requirements are met will also be accepted.</p> <p><i>Source EU GPP</i></p>
ME3	<p>Suitability for recycled paper</p> <p>Reproduction equipment is suitable for the use of recycled paper when it meets the European EN 12281:2002 standard.</p> <p><i>Verification</i></p> <p>The tenderer may be requested to substantiate, with documentation, that the reproduction equipment is suitable.</p>
ME4	<p>User instructions for green management of performance</p> <p>A guideline with instructions for maximising the environmental performance of the image processing equipment in question (addressing the functions for paper management, energy efficiency and</p>

	<p>consumables such as ink/toner cartridges) must be provided, in written form, as a specific component of the user guide and/or in electronic form on the manufacturer website.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. Products with a relevant Type 1 environmental label answering to the listed criteria will be assumed to be in compliance. Other suitable forms of documentation will also be accepted, such as a written statement from the manufacturer that the clause set out above will be fulfilled.</p> <p><i>Source EU GPP</i></p>
ME5	<p><i>(Only applicable to purchase contracts excluding maintenance)</i></p> <p>Product lifetime and warranty Repair or replacement of the product must be covered under warranty for a minimum of five years. The tenderer must also ensure that for at least a period of five years after the date of purchase, original or equivalent replacement parts are available (either directly or through other designated intermediaries). This provision does not apply in unavoidable temporary circumstances beyond the control of the manufacturer such as natural disaster.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. Products with a relevant Type 1 environmental label answering to the listed criteria will be assumed to be in compliance. Other suitable forms of documentation will also be accepted, such as a declaration from the manufacturer of compliance with the provision above.</p> <p><i>Source EU GPP</i></p>
ME6	<p><i>(Only applicable to reproduction equipment connected to a network on which a group of users run print jobs)</i></p> <p>Local confirmation of the print job prior to execution Reproduction equipment offers the option to release or delete print jobs locally or remotely.</p> <p><i>Explanation</i> A distinction between 2 concepts can be made:</p> <ul style="list-style-type: none"> • "pull printing" (also referred to as "follow-me printing"), by which a print job is sent to a central print server. This server will retain the instruction until a user identifies himself or herself on any printer within the network and retrieves the print job. • PIN printing, by which a print job is sent to a specific printer that supports PIN printing. The printing instruction will only be executed after the user has identified himself or herself. <p><i>Verification</i> The tenderer may be requested to substantiate, with documentation, that the reproduction equipment is suitable for pull printing and/or PIN printing.</p>

6. Award criteria

No.	Award criteria (GC)
GC1	<p>Energy consumption of reproduction equipment The lower the energy consumption of the supplied equipment, the higher this section of the tender will be rated.</p> <p>Calculation of total energy consumption - calculation as described in Energy Star (www.eu-energystar.org).</p> <p>The TEC (Typical Electricity Consumption) value from Energy Star is used to calculate energy consumption.</p> <p>For reproduction equipment with the printing technologies high-quality IJ, electro photography (EP), solid ink, direct thermal, dye sublimation or thermal transfer, the formula is: Number of type 1 devices times the TEC value type 1 + Number of type 2 devices times the TEC value type 2 + Number of type 3 devices times the TEC value type 3 +Etc.</p>

	<p>=Total energy consumption of all equipment</p> <p>For reproduction equipment with inkjet technology, the formula is: Number of type 1 devices times the OM value type 1 + Number of type 2 devices times the OM value type 2 + Number of type 3 devices times the OM value type 3 + Etc.</p> <p>=Total energy consumption of all equipment</p> <p>The TEC values and OM values are calculated in accordance with the Energy Star Test procedure.</p> <p><i>Verification</i></p> <p>The tenderer can be asked to submit a printout from the Energy Star database that shows the TEC value or a declaration from the tenderer's organisation that shows the TEC value as tested by Energy Star (when the TEC value has not yet been entered in the database).</p>
GC2	<p>No flame-retardant substances or preparations</p> <p>The greater the extent to which plastic components heavier than 25 g do not contain any flame-retardant substances or preparations to which one of the following risk phrases has been allocated as determined in Directive 67/548/EEC, the higher the tender will be rated. These R-phrases are:</p> <ul style="list-style-type: none"> • R45 (may cause cancer) • R46 (may cause inheritable genetic damage) • R60 (may impair fertility) • R61 (may cause harm to the unborn child) <p>This criterion will have been met when no more than 0.1% (by weight) of the relevant substances is present because trace amounts may be present in relation to any practical test.</p> <p><i>Verification</i></p> <p>The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. Products with a relevant type 1 environmental label answering to the listed criteria will be assumed to be in compliance. Other appropriate documentation will also be accepted.</p>
GC3	<p>Energy efficiency of standby mode</p> <p>Points are assigned based on the degree to which electricity consumption is switched by a power management function or similar function to a status in which the network-based standby mode is available. The lower the energy consumption, the more points are assigned.</p> <p>The energy consumption must be measured in accordance with the Test Method for Determining Imaging Equipment Energy Use Version 2.0 – Final May-2012 or equivalent method.</p> <p><i>Verification</i></p> <p>The tenderer they be requested to submit a technical file from the manufacturer. A test report showing that the products meet these criteria will also be accepted.</p> <p><i>Source EU GPP</i></p>
GC4	<p><i>(Only applicable to image processing equipment that can achieve a print/copying speed of less than 25 images per minute (monochromatic) in A4 format)</i></p> <p>Double-sided printing</p> <p>Points will be assigned to image processing equipment equipped with an automatic unit for double-sided printing/copying (duplex unit). The duplex print/copy function must be configured as standard in the manufacturer's original, official software</p> <p><i>Verification</i></p> <p>The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. Products with a relevant Type 1 environmental label answering to the listed criteria will be assumed to be in compliance. A manufacturer declaration indicating that these requirements are met will also be accepted.</p> <p><i>Source EU GPP</i></p>

7. Contract provisions

Not defined for this product group.

