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Information technology — Office equipment — Minimum information to be included in specification sheets — Copying machines

Technologies de l'information — Équipements de bureau — Information minimale devant figurer dans les notices techniques — Machines à reproduire

Reference number
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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrical Commission) form the specialised system for worldwide standardisation. National Bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organisation to deal with particular fields of mutual interest. Other international organisations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee ISO/IEC JTC1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

International Standard ISO/IEC 11159 was prepared by Joint Technical Committee ISO/IEC JTC1, *Information technology,* Subcommittee SC28, *Office equipment.*

This second edition cancels and replaces the first edition (ISO/IEC 11159:1992), which has been technically revised.

Annexes A and B of this International Standard are for information only.

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Introduction

Copying machines of many different types and capacities are now available and their specifications vary so widely that it is difficult for potential users to assess which machine might best meet their requirements.

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Information technology - Office equipment - Minimum information to be included in specification sheets - Copying machines

1 Scope

This International Standard is intended to facilitate the users in selecting a copying machine which meets their requirements.

This International Standard specifies the minimum information that shall be included in the specification sheets of copying machines so that users may compare the characteristics of different machines. This International Standard also defines the tests to be made on copying machines in order to verify the specifications given in the specification sheets, when no other Standards are available.

This International Standard applies to copying machines that could be operated in an office environment. Copying machines requiring specially equipped rooms or specially instructed operators are not considered in this International Standard.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 554:1976, *Standard atmospheres for conditioning and/or testing - Specifications.*

ISO 7779:1988[1)], *Acoustics - Measurement of airborne noise emitted by computer and business equipment.*

ISO 9295:1988, *Acoustics - Measurement of high-frequency noise emitted by computer and business equipment.*

ISO 9296:1988, *Acoustics - Declared noise emission values of computer and business equipment.*

IEC 950:1991, *Safety of information technology equipment, including electrical business equipment.*

CISPR Pub.22 *Limits and methods of measurement of radio interference characteristics of information technology equipment.*

3 Conformance

In order to comply with this International Standard, specification sheets shall contain, in the order shown, all items listed in clause 4 which are relevant to the machine being described.

4 Test and measurement conditions

Unless otherwise specified, all tests and measurements shall be conducted at the following conditions:

- temperature: 18 °C to 25 °C
- relative humidity 30% to 70%
- voltage: rated input voltage
- frequency: rated frequency
- paper size: A4
- paper weight: 60 g/m^2 to 90 g/m^2

Whenever a capacity is given in sheets, the reference paper weight shall be specified.

When A4 paper size is specified, the size most commonly used in the country can be used, both for the test page and the copies. This shall be indicated in the specification sheet.

When weight of paper (g/m^2) is given, it is assumed that the paper has been conditioned in the standard atmosphere defined in ISO 554 (temperature 20 °C ± 2 °C; relative humidity 65% ± 5%).

[1)] Currently under revision.

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5 Information to be included in the specification sheets

Table 1 defines, for each parameter, the number, the name of the parameter, a short description of the entry, and the measurement method. These constitute the information to be included in the specification sheet.

The heading of the specification sheet shall indicate that it has been prepared in accordance with this International Standard. The numbers and headings of the parameters in Table 1 shall be used. Parameters not applicable may be ignored, without changing the numbers of other parameters.

Table 1 - Parameters

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
1 General data		
1.1 Machine name, model and/or model number	Product name, model number.	
1.2 Type	States if the machine is portable,desk-top, floor-standing (console).	
1.3 Type of platen	Moving or stationary. If moving, states the maximum permissible weight on the platen. If no platen is provided, and the original is to be fed into the machine, indicate "feed-through type".	
2 Copying method		
2.1 Imaging method	Digital, analogue or hybrid. States if imaging method is analogue or digital or possibly a hybrid involving characteristics of both analogue and digital.	
2.2 Copying process	Electrostatic process, electrophotographic process, direct or indirect method, ink-jet, thermal transfer.	
2.3 Developing process	Wet process, dry process, type of developer (mono or dual components).	
2.4 Fusing or fixing system	Heat roller fusing, flash fusing, heat and pressure fusing. Not applicable in the case of wet developing process.	

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
2.5 Type of photoreceptor	Selenium, organic material. Applicable only for indirect electrostatic process.	
3 Colour copying		
3.1 Monochrome	Available / not available. Specifies black or alternate single colours.	
3.2 Multi-colour	Available / not available. Also known as functional colour, spot colour, highlight or accent colour. Indicate if colour can be added to a copy, or changed across a copy. State the number of discrete colours that can be reproduced by colorants residing in the machine.	
3.3 Full colour	Available / not available. States if the machine can reproduce full colour originals, continuous tone, half-tone or both.	
4 Copying margins	In millimetres, from the top, bottom, left and right edges of the paper. Indicates the areas in which copying is not possible.	The measurement shall be made using a test page of A4 size, with a pattern, of the users choice, extending inward from the edges of the test page to a line about 20 mm from the edges. The copier shall be set for a 1:1 magnification and the test page deposed on the platen, aligned with the platen reference markings, if any. Three copies shall then be made in continuous mode, and the maximum blank areas around the page, measured at the centre of each side, shall be the value for this parameter.

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
5 Performance data		
5.1 Copying speed	Number of copies per minute. Continuous copying, A4 paper size, 1:1 magnification, steady state.	The copier shall be set for a 1:1 magnification, and an original deposed on the platen. Either of the following two methods of measurement can be used. The method used shall be indicated in the specification sheet. 1 Copies shall be made continuously, and the time T (sec.) needed to produce a convenient number N of copies, measured from the time a copy following the first one is fully ejected to the time the Nth copy is fully ejected, is measured. The copying speed shall then be: $S = 60 \times \frac{N-1}{T}$ The value of S (copies/min) shall be rounded off to at least two significant digits. N is chosen to produce repeatable accuracy of ± 5%. 2 The number of copies produced during one minute is counted, starting the timer from the moment a copy following the first one is fully ejected. The number of copies is the value of the copying speed. Specify for monochrome and colour if different.

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
5.2 First copy-out time (FCOT)	In seconds. Time from the "copy" command to completing delivery of the first copy. Same conditions as in 5.1.	FCOT shall be measured in seconds, and shall not include the warm-up time (5.3), or any automatic adjustment necessary to bring the copier to a ready state. The copier shall be ready for copying and set for a 1 : 1 magnification. An original shall be deposed on the platen. The time in seconds from the moment the copy command is issued to the time the first copy is fully ejected shall be measured and reported to two significant digits.
5.3 Warm-up time	1) Time in minutes and/or seconds from power up to ready state. 2) Time in minutes and/or seconds from power saver mode to ready state.	Warm-up time shall be measured in two ways, depending on the status of the copier. 1 If the copier is off, it shall measure the time between power on and the indication of a ready status. 2 If the copier is in a "power saver mode", it shall measure the time between the start command and the indication of a ready status or the beginning of copying. If the machine is pre-heated, this should be indicated.
5.4 Recommended monthly copy volume	Number of copies per month. Manufacturers recommended range of use.	For the determination of this parameter, the month is considered consisting of 20 days of 8 hours each.

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
5.5 Halftone performance		
5.5.1 Monochrome	Available/not available. States if the machine can produce monochrome halftones from continuous-tone originals.	
5.5.1.1 Screen rulings	Expressed in lines per millimetre or equivalent. States the screen ruling or range of screen rulings available.	
5.5.2 Colour	Available/not available. States if the machine can produce colour halftones from continuous-tone originals.	
5.5.2.1 Screen rulings	Expressed in lines per millimetre or equivalent. States the screen ruling or range of screen rulings available.	
6 Characteristics of the originals		
6.1 Acceptable type	Sheets, books, computer forms.	
6.2 Maximum sizes	Indicate the applicable standard, or dimensions in millimetres. A sizes, B sizes, North American sizes.	Specify originals whose content can be completely reproduced. Indicate if the accepted size is different for sheets and books.

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Table 1 (cont'd)

7 Input document handling	Refers to "on line" capability integrated with the copier.	
7.1 Document handler type	Name. States if automatic re-circulating (pre-collating), automatic feeding (post-collating), or semiautomatic positioning (single sheet or stream feed).	
7.2 Loading (ordering and user aspects)	Specifies ordering and user aspects. State if originals are loaded in natural reading order, and face-up or face-down.	
7.3 Original sizes	Minimum and maximum. Indicates applicable standard or dimensions in millimetres. Specifies ability to handle mixed sizes. A sizes, B sizes, North American sizes.	Specify originals which can be handled, and reproduced according to 6.2.
7.4 Paper weight	Minimum and maximum in g/m^2. States restrictions on weight of originals.	The manufacturer shall indicate the range of paper weight (in g/m^2) to provide normal warranted performance, and the reference paper weight to be used for capacity definition.
7.5 Capacity	Number of originals stackable in the handler.	The manufacturer shall indicate the nominal capacity with respect to the reference paper weight. Testing shall be done by filling the paper supply source with paper from a newly opened package and counting the sheets.

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
7.6 Original exchange speed	Sheets per minute. Specifies the exchange speed of A4 originals when one 1:1 copy is made of each A4 original in succession.	The copier shall be set for one copy of the original, non-collate or non-sort mode, no other special features like auto paper select, auto exposure, etc. The measurement shall be conducted with the document handler working, starting from the copy following the first one out. Copies shall be made continuously, and the time T(sec) needed to use a number N of originals (10 or more), measured from the time a copy following the first one is fully ejected to the time the Nth copy is fully ejected, is measured. The original exchange speed shall then be: $S = 60 \times \frac{N-1}{T}$ The value of S(shts/min) shall be rounded off to at least two significant digits. N is chosen to produce a repeatable accuracy of ± 5%.
7.7 Duplex originals	Yes/no/optional. Specifies any restriction.	
7.8 Computer forms feeding	Available/not available; automatic feed or single sheet.	
7.9 Automatic size and position sensing	Standard/optional. Specifies if correct copy paper size for 1:1 reproduction is available and automatically selected; user warning provided/not provided if correct paper size unavailable.	

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
8 Output material		
8.1 Paper type required	Plain, coated, thermal paper.Recycled paper	The manufacturer shall specify for which copying materials, other than normal paper, normal warranted performance can be assured.
8.2 Special material	Transparent sheets, labels, envelopes and recycled paper.	The manufacturer shall specify the special copying materials that can be processed, even if copying performance is degraded.
8.3 Paper size		The manufacturer shall state the minimum and maximum width and the minimum and maximum length of the paper. This indication can be given either in millimetres or quoting standard paper sizes.
8.3.1 Paper in sheet	Available/not available. Minimum and maximum. Indicates the applicable standard dimensions in millimetres. A sizes, B sizes, North American sizes.	
8.3.2 Paper in rolls	Available/not available. Width, maximum and minimum in millimetres; length in metres; diameter of the roll, in millimetres. Indicates if length is manually pre-selectable (maximum and minimum); and if the paper is cut automatically to length of original.	
8.4 Paper weight	Minimum and maximum in g/m^2. Specifies if for sheet or roll. Specifies if for single copy, duplex mode or both.	The manufacturer shall indicate the range of paper weight (in g/m^2) to provide normal warranted performance, and the reference paper weight to be used for capacity definition.

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
9 Paper handling		
9.1 Paper supply device	Manual, cassette, tray, drawer. Indicates which feeding systems are standard and which are optional.	
9.2 Paper supply capacity	Number of sheets for each paper supply device.	The manufacturer shall indicate the nominal capacity with respect to the reference paper weight. Testing shall be done by filling the paper supply source with paper from a newly opened package and counting the sheets.
9.3 Paper feed direction	Long edge feed or short edge feed. Indicates the paper sizes.	
10 Output copy handling		Refers to "in line" capability integrated with the copier
10.1 For machines which post-collate copied sets		
10.1.1 Sorter	Standard/optional/not available.	
10.1.1.1 Acceptable paper sizes	Minimum and maximum. Indicates the applicable standard name and/or dimensions in millimetres. A sizes, B sizes, North American sizes.	The manufacturer shall state the minimum and maximum width and the minimum and maximum length of the paper. This indication can be given either in millimetres or quoting standard paper sizes.
10.1.1.2 Number of bins	Indicates if non-sort bin is provided.	
10.1.1.3 Bin capacity	Number of sheets in each bin.	The manufacturer shall indicate the nominal capacity with respect to the reference paper weight. Testing shall be done by counting the number of sheets in a filled receptacle.
10.1.1.4 Stapling	Standard/optional/not available. Refers to in-bin capability.	

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Table 1 (continued)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
10.1.1.4.1 Capacity	Maximum number of staples.	
10.1.1.4.2 Set size	Maximum number of sheets per stapled set.	The manufacturer shall specify the number of sheets, of the reference paper weight, that can be stapled with normal warranted performance.
10.2 For machines which pre-collate copied sets	States which capabilities can be provided together.	
10.2.1 Output catch tray	Standard/optional/not available.	
10.2.1.1 Paper sizes	Maximum and minimum standard sizes. Indicates the applicable standard or dimensions in millimetres. A sizes, B sizes, North American sizes.	The manufacturer shall state the minimum and maximum width and the minimum and maximum length of the paper. This indication can be given either in millimetres or quoting standard paper sizes.
10.2.1.2 Capacity	Maximum number of sheets.	The manufacturer shall indicate the nominal capacity with respect to the reference paper weight. Testing shall be done by counting the number of sheets in a filled receptacle.
10.2.1.3 Offsetting capability (shifting)	Standard/optional/not available. If available, specifies minimum offset distance between sets in millimetres. Allows physical separation of copied sets.	
10.2.2 Stacker	Standard/optional/not available.	
10.2.2.1 Paper sizes	Maximum and minimum standard sizes. Indicates the applicable standard or dimensions in millimetres. A sizes, B sizes, North American sizes.	The manufacturer shall state the minimum and maximum width and the minimum and maximum length of the paper. This indication can be given either in millimetres or quoting standard paper sizes.

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Table 1 (continued)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
10.2.2.2 Capacity	Maximum number of sheets.	The manufacturer shall indicate the nominal capacity with respect to the reference paper weight. Testing shall be done by counting the number of sheets in a filled receptacle.
10.2.3 Stapler	Standard/optional/not available.	
10.2.3.1 Capacity	Maximum number of staples.	
10.2.3.2 Set size	Maximum number of sheets for stapled set.	
10.2.3.3 Offsetting capability (shifting)	Standard/optional/not available. If available, specifies minimum offset distance between sets in millimetres. Allows physical separation of copied sets.	
10.2.4 Folder	Standard/optional/not available.	
10.2.4.1 Paper sizes	Maximum and minimum standard sizes. Indicates the applicable standard or give dimensions in millimetres. A sizes, B sizes, North American sizes.	The manufacturer shall state the minimum and maximum width and the minimum and maximum length of the paper. This indication can be given either in millimetres or quoting standard paper sizes.
10.2.4.2 Set size	Maximum number of folded sheets.	
10.2.4.3 Types of fold	State z-fold, signature, etc.	
10.2.5 Binder	Standard/optional/not available.	Indicate details.
10.2.5.1 Process	Description or name. On-line, hot or cold, wet or dry.	

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
10.2.5.2 Paper sizes	Maximum and minimum standard sizes. Indicates the applicable standard or dimensions in millimetres. A sizes, B sizes, North American sizes.	The manufacturer shall state the minimum and maximum width and the minimum and maximum length of the paper. This indication can be given either in millimetres or quoting standard paper sizes.
10.2.5.3 Set size	Maximum number of bound sheets.	
10.2.6 Other capabilities	State other finishing capabilities, e.g. insertion, shrink wrap, punching, drilling, stitching, etc.	
11 Reduction/enlargement		A test page shall be made of A4 paper, with a test pattern consisting of a square, having a side of at least 10 cm, printed in the center of the page and with the sides parallel to the sides of the page. This test page shall be used in the following parameters 11.1, 11.2, 11.3
11.1 Possible reduction	Minimum copy size as a percent of the original. Indicates if in discrete steps and/or continuous.	The copier shall be set for the required reduction and the test page deposed on the platen, aligned with the platen reference markings, if any. Three copies shall then be made in continuous mode, and the relationship between the size of the image on the original and on the copy (averaged on the three copies) and expressed in percent of the original, shall correspond to the setting of the copier. Any measurable difference for the values measured in the direction of paper travel and in the direction perpendicular to travel shall be reported.

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
11.2 Possible enlargement	Maximum copy size as a percent of the original. Indicate if in discrete steps and/or continuous.	The measurement for the maximum value and possibly at intermediate values shall be made using a test page as defined in 11. The copier shall be set for the required enlargement and the test page deposed on the platen, aligned with the platen reference markings, if any. Three copies shall then be made in continuous mode, and the relationship between the size of the image on the original and on the copy (averaged on the three copies) and expressed in percent of the original, shall correspond to the setting of the copier. Any measurable difference for the values measured in the direction of paper travel and in the direction perpendicular to travel shall be reported. When the image is enlarged beyond the paper size, a square size of less than 10 cm may be used, and the size used shall be reported.
11.3 Precision of 1:1 ratio	Percent deviation between original and copy dimensions. Indicates for the paper feeding direction and the perpendicular direction.	The measurement shall be made using a test page as defined in 11. The copier shall be set for 1 : 1 ratio and the test page deposed on the platen, aligned with the platen reference markings, if any. Three copies shall then be made in continuous mode, and the deviation percent between the size of the original and of the copy (averaged on the three copies) shall be given for the direction of paper travel and the direction perpendicular to travel.

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
12 Manufacturer-declared copying features		
12.1 Duplex copying	Available/not available/optional.	
12.2 Others	Lists available copying features (automatic paper size selection, automatic magnification selection, trimming, masking, page separation copying, image density control, job interrupt).	
13 Maximum pre-selectable number of copies	Number of copies. Specifies any continuous use limitations.	
14 Physical characteristics		
14.1 Dimensions	Width x depth x height (centimetres). Indicates if it is the envelope around or if trays, knobs etc. are not included.	
14.2 Space required - operation	Width x depth x height (centimetres). Varies with options. This parameter includes space for operator functions such as paper handling and jam removal. Indicates if it is with or without accessories.	
14.3 Space required - maintenance	Width x depth x height (centimetres). The parameter includes space for access to all service areas and the use of required tools. Indicates if it is with or without accessories.	

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
14.4 Weight	Installed weight in kilograms. Indicates if it is with or without accessories. For console machines, indicates if the machine is with wheels or rollers.	
15 Operating environment	Minimum and maximum ambient temperature, and related range of relative humidity. This indication is intended to give the user a guide to the expected machine operating environment.	
16 Power source	Power rating plate as per IEC 950.	
16.1 Rated voltage or voltage range	Expressed in volts. Indicates if AC or DC. AC power: indicates the number of phases. DC power: indicates if built-in battery. Indicates tolerances.	
16.2 Rated frequency or frequency range	Expressed in hertz. For AC power only. Indicates tolerance.	
16.3 Current	Maximum current in amperes. Indicates if special mains fuses are required.	The maximum current shall be measured and indicated in Amperes. This measurement shall be made with all the settings that can have an influence on the current value set to the case producing the maximum value. The inrush current at the starting of the machine shall not be considered for this indication, but shall be taken into consideration for the specification of the fuses. Specify for both basic and maximum configuration.

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Table 1 (cont'd)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
16.4 Power	Maximum power in kilowatts - operating - standby. Indicates the value at the rated input voltage.	The maximum power shall be measured and indicated in kilowatts. This measurement shall be made with all the settings that can have an influence on the current value set to the case producing the maximum value. Specify for both basic and maximum configuration.
16.5 Average Power consumption	Average power consumption per hour in kilowatts - operating - standby - power saver mode. For operating mode, indicates the average power consumption for continuous copying on A4 paper, 1:1 ratio, of a document with 4 % to 7 % coverage. Useful for estimating air conditioning requirements.	The average power consumption per hour shall be stated in kilowatts. The measurement shall be made with the machine in a steady state, during a test period of not less than 10 minutes. An integrating measuring instrument shall be used. The power consumption shall be measured under the following conditions: – standby status (machine ready to work) – "power saver mode" condition – continuous copying in A4 size paper, with a 1 : 1 ratio, of an original with a 4% to 7% image coverage. Specify for both basic and maximum configuration.
17 Safety		
17.1 Safety regulations	Applicable standards. Indicates the applicable national deviations.	
17.2 Safety data sheets	Available/not available. Indicates the possible hazardous material and the way to dispose of it, if required.	

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Table 1 (concluded)

Parameter	Description of the entry Remarks and examples	Definitions and methods of measurement
18 Electromagnetic compatibility (EMC)	Applicable standards. Emission and susceptibility to be considered.	
19 Emissions		
19.1 Acoustical noise	Sound power levels and sound pressure levels.	Measure according to ISO 7779 and ISO 9295. Declare according to ISO 9296. Specify for basic and maximum configuration.
19.2 Heat emission	For estimating purposes it may be considered that the power consumed by a copier is nearly completely transformed in heat.	The heat emission per hour shall be indicated in kW, for the three conditions specified under 16.5. $\text{heat emission per hour} = \frac{\text{Power consumption}[kW]}{3600}$
20 Consumable supplies	Customer replacement and material reclaiming dispositions: Lists the consumable items and the packaging.	
21 Optional equipment	Peripheral equipment that changes the functionality of the machine (e.g. a sorter, a document handler, a 35 mm slide projector, a fanfold paper feeder).	
22 Accessory equipment	Peripheral equipment that does not change the functionality of the machine (e.g. paper cabinet).	
23 Others	An entry category for the supplier to highlight features or functionality that does not fit in any of the previous listed parameters. Remote diagnostic capability, user interfaces, connectivity from a communication perspective.	

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Annex A

(informative)

Bibliography

ISO 216:1975, *Writing paper and certain classes of printed matter - Trimmed sizes - A and B series.*

IEC 825-1:1993, *Safety of laser products - Part 1: Equipment classification, requirements and user's guide.*

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Annex B
(informative)

Example of a layout for a specification sheet

1. General data

1.1 Machine name/model and/or model number _____

.....

1.2 Type

portable ☐ desk-top ☐ floor-standing (console) ☐

1.3 Type of platen

Movement during exposure

moving ☐ max. Permissible weight ..... (kg)

fixed ☐

feed through type ☐

2. Copying method

2.1 Imaging method

analogue ☐ digital ☐ hybrid ☐

2.2 Copying process _____

2.3 Developing process _____

2.4 Fusing or fixing system _____

2.5 Type of photoreceptor _____

3. Colour copying

3.1 Monochrome copy ☐ single colour _____

3.2 Multi-colour copy ☐ colours _____

number of colours in one copy .....

3.3 Full colour copy ☐

reproduction of originals: full colour ☐

continuous tone ☐

half tone ☐

4. Copying margins on copy (mm) / original same size, scale 1:1:

from the top ..... from the bottom .....

from left ..... from right .....

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5. Performance data

5.1 Copying speed

Number of copies per minute .....

additional information _____

5.2 First copy out time ..... seconds

document on platen ☐ automatic document handling ☐

5.3 Warm-up time

from power up to ready state ..... min ..... seconds

from power saver mode to ready state ..... min ..... seconds

5.4 Recommended monthly copy volume: _____

.....

5.5 Halftone performance

5.5.1 Monochrome reproduction

5.5.1.1 Screen rulings ..... lines per mm

5.5.2 Full colour reproduction

5.5.2.1 Screen rulings ..... lines per mm

6. Characteristics of the original

6.1 Acceptable type _____

6.2 Max. Sizes: ..... or ..... mm x ..... mm

additional information _____

7. Input document handling

7.1 Document handler type _____

pre-collating ☐ post-collating ☐ single sheet feed ☐

7.2 Positioning (loading)

original face-up ☐ original face-down ☐

7.3 Original sizes

min. size: ..... or ..... mm x ..... mm

max. Size: ..... or ..... mm x ..... mm

mixed sizes ☐

7.4 Paper weight: min ..... g/m^2 max ..... g/m^2

7.5 Capacity document handler max ..... originals

7.6 Original exchange speed: ..... sheets per minute

7.7 Duplex originals: YES ☐ NO ☐ optional ☐

7.8 Computer forms feeding

automatic feed ☐ manually ☐

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7.9 Automatic size and position sensing ☐

optional ☐

User warning if correct paper size unavailable: Y/N

8. Output material

8.1 Paper type

plain paper o coated paper o

thermal paper o recycled paper o

8.2 Special material

Transparent sheets o labels o envelopes o

recycled paper ☐

8.3 Paper size

8.3.1 Paper in sheets o

min. size: ..... or ..... mm x ..... mm

max. size: ..... or ..... mm x ..... mm

8.3.2 Paper in rolls o width: min ..... mm max ..... mm

roll length ..... m diameter of the roll ..... mm

copy length manually pre-selectable o

paper cut automatically to length of original o

8.4 Paper weight

simplex copy min ..... g/m^2 max ..... g/m^2

duplex copy min .....g/m^2 max .....g/m^2

paper in rolls min .....g/m^2 max ..... g/m^2

9. Paper handling

9.1 Paper supply device o manually o

cassette o tray o drawer o

9.2 Paper supply capacity [1)]

number of sheets for each supply device .....

.....

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9.3 Paper feed direction

long edge feed o short edge feed o

additional information _____

10. Output copy handling

10.1 For machines which post collate after copying

10.1.1 Sorter standard o optional o

10.1.1.1 Accepted paper sizes:

min size ..... or ..... mm x ..... mm

max size ..... or..... mm x ..... mm

10.1.1.2 Number of bins

additional information _____

10.1.1.3 Bin capacity: number of sheets [1] .....

10.1.1.4 Sorter with stapler: standard o optional o

10.1.1.4.1 Capacity

max. number of staples .....

additional information _____

10.1.1.4.2 Set size [1]: max. number of sheets per stapled set .....

10.2 For machines which pre-collate copied sets

10.2.1 Output catch tray o optional o

[1] Information to reference of paper weight 80 g/m^2
(varying data should be indicated in reference to paper weight)

10.2.1.1 Paper sizes

min. size ..... or ..... mm x ..... mm

max. size ..... or ..... mm x ..... mm

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10.2.1.2 Capacity output catch tray: [1] ..... sheets

10.2.1.3 Offsetting capability o standard o optional o
min. offset ..... mm

10.2.2 Stacker: standard o optional o

10.2.2.1 Copy paper sizes:

min. size ..... or ..... mm x ..... mm
max. size ..... or ..... mm x ..... mm

10.2.2.2 Capacity Stacker: max. number of sheets [1] .....

10.2.3 Stapler: standard o optional o

10.2.3.1 Capacity: max. number of staples .....
additional information _____

10.2.3.2 Set size: max. number of sheets [1] per stapled set .....

10.2.3.3 Offsetting capability o standard o optional o
min. offset ..... mm

10.2.4 Folder: standard o optional o

10.2.4.1 Copy paper size
min. size ..... or ..... mm x ..... mm
max. size ..... or ..... mm x ..... mm

10.2.4.2 Set size: max. number of folded sheets [1] .....

10.2.4.3 Type of fold _____

10.2.5 Binder: standard o optional o

10.2.5.1 Binding process _____

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on line o hot o wet o dry o

10.2.5.2 Copy paper size

min. size ..... or ..... mm x ..... mm

max. size ..... or ..... mm x ..... mm

10.2.5.3 Set size: max. number of bound sheets .....

10.2.6 Other capabilities _____

11. Reduction / enlargement

11.1 Possible reduction ..... % in discrete steps o continuous o

11.2 Possible enlargement ..... % in discrete steps o continuous o

11.3 Precision of 1:1 ratio

feeding direction	(+) ..... %	(-) ..... %
perpendicular direction	(+) ..... %	(-) ..... %

12. Manufacturer-declared copying features

12.1 Duplex copying o

12.2 Others _____

.....

13. Maximum pre-selectable number of copies .....

14. Physical characteristics

14.1 Dimensions:

width ..... cm height ..... cm depth ..... cm

14.2 Space required - operation:

width ..... cm height ..... cm depth ..... cm

14.3 Space required - maintenance:

width ..... cm height ..... cm depth ..... cm

min. distance:

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front ..... cm right ..... cm left ..... cm

14.4 Weight ..... kg

additional information _____

15. Operating environment

ambient temperature min .....^{0}C max ..... ^{0}C

relative humidity min ..... % max ..... %

additional information _____

16. Power source

16.1 Rated voltage or voltage range V

additional information _____

16.2 Rated frequency for frequency range ..... Hz

16.3 Current max ..... A

additional information _____

16.4 Power (at rated input voltage): max ..... kW

additional information (e. g. with accessories):

.....

16.5 Power consumption (kW)

- operating ..... kW
- standby ..... kW
- power saver mode .....kW

17. Safety

17.1 Safety regulation

machine complies to following standards and / or regulations

.....

.....

17.2 Safety data sheets available ☐

additional information _____

18. Electromagnetic compatibility (EMC)

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applicable standards _____

.....

19. Emissions

19.1 Noise

Noise-emission	Sound-power levels	Sound pressure levels
operating	L_{WA} = ... B (A)	L_{pA} = ... dB (A)
standby	L_{WA} = ... B (A)	L_{pA} = ... dB (A)
power saver mode	L_{WA} = ... B (A)	L_{pA} = ... dB (A)

19.2 Heat emission

- operating ..... kJoule
- standby ..... kJoule
- power saver mode ..... kJoule

20. Consumable supplies: _____

.....

.....

21. Optional equipment: _____

.....

.....

22. Accessory equipment: _____

.....

.....

23. Others: _____

.....

.....

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