



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS X 6910 : 2004
(JBMIA/JSA)

**Information technology—Office
equipment—Copying machines and
Multi-function devices—Information
to be included in specification
sheets and related test methods**

ICS 35.240.20; 35.260

Reference number : JIS X 6910 : 2004 (E)

PROTECTED BY COPYRIGHT

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from Japan Business Machine and Information System Industries Association (JBMIA)/Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

Date of Establishment: 2004-04-20

Date of Public Notice in Official Gazette: 2004-04-20

Investigated by: Japanese Industrial Standards Committee
Standards Board

Technical Committee on Information
Technology

JIS X 6910:2004, First English edition published in 2005-03

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2005

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

Contents

		Page
1	Scope	1
2	Normative references	1
3	Definitions	1
4	Information to be described in specification	2
5	Form of specification	2
6	Related testing methods	3
Annex 1 (normative)	Specification sheet of copying machines and multi-function devices (body)	25
Annex 2 (normative)	Specification sheet of document feeder	27
Annex 3 (normative)	Specification sheet of affiliate paper feeding device	28
Annex 4 (normative)	Specification sheet of sorter	29
Annex 5 (normative)	Specification sheet of finisher	30
Annex 6 (normative)	Specification sheet of scanner function	31
Annex 7 (normative)	Specification sheet of printer function	32
Annex 8 (normative)	Specification sheet of facsimile function	33
Annex 9 (normative)	Specification sheet of internet facsimile function (including electronic mail sending function)	34

Information technology—Office equipment—Copying machines and Multi-function devices—Information to be included in specification sheets and related test methods

1 Scope This Japanese Industrial Standard specifies the minimum information to be included in the specification of copying machines and multi-function devices for making possible the comparison of the function between the various type of machines, in order to make easy the selection of the copying machines and multi-function devices meeting the requirements of purchasers and users themselves. In addition, this Standard also specifies the related testing methods.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 0137 *Glossary of terms for copying machines*

JIS P 0138 *Writing paper and certain classes of printed matter—Trimmed sizes—A and B series*

JIS X 7778 *Acoustics—Declared noise emission values of computer and business equipment*

JIS X 7779 *Acoustics—Measurement of airborne noise emitted by information technology and telecommunications equipment*

JIS Z 8733 *Acoustics—Determination of sound power levels of noise sources using sound pressure—Engineering method in an essentially free field over a reflecting plane*

3 Definitions For the purpose of this Standard, the definitions given in **JIS B 0137** and the following definitions apply:

- a) **digital copier** copier which, after converting an image to an electrical signal, forms again a visual image by this electrical signal
- b) **multifunction device/peripheral (MFD/MFP)** equipment formed by adding scanner function, printer function, facsimile function, etc. to the copier. The printer given a copying machine function is also included in a range of the multifunction device (“having a copying machine function” includes such a case that the function is given by adding an option on the market. Moreover, the copier with magnification function is included as well in the category of multifunction devices).
- c) **main scanning** In loading system, it is perpendicular to the scanning direction of optical system. In writing system, it is in axial direction of photoreceptor.

- d) **sub scanning** In loading system, it is the scanning direction of the optical system. In writing system, the rotation direction of the photoreceptor.
- e) **finisher** device which finishes plural originals one by one, releases and stacks
- f) **stapler** function or device to bind automatically the papers stored in the bottle or tray
- g) **punch** function or device to make holes for filing copy paper
- h) **saddle stitch** function to provide staples automatically on the middle part of the paper copied and bind to folio
- i) **z-fold** one of the folding forms that folds one half of the paper folded already in half further in half to make the cross section Z-form

4 Information to be described in specification Each item (name) and contents to be described (explanation, specified value, etc.) shall be informed.

In the specification, each name shall be described in the order of the items given in table 1. All applicable items shall be described in the specified order.

The item having no function may be omitted.

Remarks : When extracting the items and specified values from the specification for describing in catalog, the describing order is optional and item number is not specifically given.

5 Form of specification

5.1 The body shall be as specified in annex 1.

5.2 Auxiliary devices

- a) **Document feeder**, as specified in annex 2.
- b) **Affiliate paper feeder**, as specified in annex 3.
- c) **Sorter**, as specified in annex 4.
- d) **Finisher**, as specified in annex 5.

5.3 Extended function

- a) **Scanner function**, as specified in annex 6.
- b) **Printer function**, as specified in annex 7.
- c) **Facsimile function**, as specified in annex 8.
- d) **Internet facsimile function (including electronic mail sending function)**, as specified in annex 9.

6 Related testing methods

6.1 Test and measuring condition Unless otherwise specified, all tests and measurements shall be carried out under the following condition. “Normal use condition” stated in table 1 refers to the following condition:

- Temperature: $23\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$
- Relative humidity: $(50 \pm 20)\%$
- Power supply voltage: rated input voltage
- Power supply frequency: rated frequency
- Paper size: A4
- Paper unit weight: 60 g/m^2 to 90 g/m^2

If other size than A4 is used, the dimensions of the paper used or its size designation (No.) (B4, A4, etc.) according to **JIS P 0138** shall be clearly described on the specification.

The papers used for the test shall be conditioned to the temperature and the humidity specified above.

6.2 Testing method Testing method for each item shall be as specified in table 1.

Table 1 Information to be described in specification and related testing methods

Item	Contents to be described in specification	Testing method
1 Body		
1.1 Name	Describe the name of product and type number.	
1.2 Type	Describe the distinction among desk top type, console type, and portable type, and between integrated type and separated type.	
1.3 Copying system	Describe the distinction between analogue and digital types.	
1.4 Colour copying	If colour copying is available, describe whether monochromatic colour, full colour, etc.	
1.5 Type of photoreceptors	Describe the types of photoreceptors.	
1.6 Light source for reading	Describe the type of light source for reading and the rated power consumption (W).	
1.7 Form of original tray	Describe the distinction between moving type and fixed type. If the machine has no original tray and it transports the original document as it is or uses an original document carrier (auxiliary device for transporting the original document), describe it to be original moving type.	
1.8 Original reading system	Describe the type of original reading system and original reading device.	
1.9 Writing-in system	Describe the system that writes latent image in photoreceptor.	
1.10 Developing system	With regard to developer, describe the distinction between 1 component and 2 components.	
1.11 Copy density adjustment	Describe the distinction between manual type and automatic type. If manual type, additionally describe the type such as stepless, stepped adjustment, etc.	

Table 1 (continued)

Item	Contents to be described in specification	Testing method
1.12 Fixing system	Describe the distinction of heat roller fusing, flash fusing, oven fusing or pressure fixing.	
1.13 Paper feeding system/ paper stack capacity	Describe the distinction between automatic paper feeding and manual paper feeding and the number of steps (attached to the body) of cassette, deck, tray, etc. In this case, specify the basic weight (g/m ²) of paper for every cassette, deck and tray and describe together the sheet storage capacity and, if the number of paper feed steps is multiple, describe the sheet storage capacity of each step. In case of roll paper, describe the width and length.	
1.14 Reading resolution	Describe the reading resolution in main scanning direction and sub-scanning direction in "dpi" or "dpi (dots/25.4 mm)". If a thought is given to heightening the resolution simulatively, describe the equivalent resolution. When heightening the resolution simulatively, it is expressed by affixing "equivalent". Example: Main scanning 1 200 dpi equivalent × sub-scanning 1 200 dpi equivalent.	
1.15 Writing-in resolution	Describe the writing-in resolution in main scanning direction and sub-scanning direction in "dpi" or "dpi (dots/25.4 mm)". If a thought is given to heightening the resolution simulatively, describe the resolution equivalent. When heightening the resolution simulatively, it is expressed by affixing "equivalent". Example: Main scanning 1 200 dpi equivalent × sub-scanning 1 200 dpi equivalent.	

Table 1 (continued)

Item	Contents to be described in specification	Testing method
1.16 Tone/representation colour	For monochromatic colour where the combination of colours is impossible, describe the number of colours that are used or the name of the colour. Full colour is expressed in general with the combination of yellow, magenta, cyan and black. Describe the number of tone steps possible to be expressed by each colour including black. Or the maximum number of representation colour (theoretical value) capable of being expressed by using a combination of the basic colours.	
1.17 Type of usable originals	Describe sheet, book, paper for computer, etc.	
1.18 Copy paper	When using the copy paper with special processing, describe that effect. In addition, describe the unit weight of the paper feedable in g/m ² preferably.	
1.19 Original size	Describe the maximum dimensions in millimetre or the dimensional designation (No.) given in JIS P 0138 . In addition, it is recommended to describe the limit of thickness of the originals, if any, and the maximum mass to be put on the original receiving tray.	
1.20 Copy dimensions	Describe the maximum and minimum dimensions the machine is capable of copying in millimetre (mm) or with the dimensional designation (No.) given in JIS P 0138 . Besides, if there is difference in these dimensions between manual type and automatic type paper feeding, describe that effect.	

Table 1 (continued)

Item	Contents to be described in specification	Testing method
1.21 Copying margin	Areas in which copying is not possible when copying the original, of certain dimensions, having a full written text with no space around the edges, indicated by the width dimensions of the parts impossible to be copied at the top, bottom and right and left ends in millimetre (mm).	Measure the width of the blank areas from the top, bottom, and right and left ends of the copied paper in a normal use condition and record each of them as the copying margin at each end.
1.22 Copy ratio	Express magnification, reduction and 1 : 1 magnification respectively with a ratio in length when taking the dimension of the original as 1, down to two decimal places. For 1 : 1 magnification, the range of error is expressed in percentage (%). The error shall be the maximum value including the instrumental error.	
1.23 Number of sheets continuously copied	Describe the maximum number of sheets copied continuously that the copying machine can be set for.	
1.24 Continuous copying speed	Describe the number of sheets possible to be copied in 1 min in a normal use condition in sheets/min (A4, 1 : 1 magnification and in standard feeding direction). If the copying speed differs according to paper size, describe that effect. For colour copying machine, record both the number of sheets at the time of colour copy and at the time of white and black copy. If the continuous copying speed differs according to copying process, it is preferable to describe that effect and, moreover, to describe the speed at each process. The number of copied sheets shall be expressed with the numerals of the following format. Unit is the number of copies per minute (CPM: copy per minute). a) For less than 10 CPM, round off the second decimal place and express with two places of significant digits ○. ○;	Copy 11 sheets continuously in a normal use condition (A4, 1 : 1 magnification and in standard feeding direction), measure the time between the completion of the first sheet ejection and the completion of the 11th sheet ejection (obtain t seconds) and convert it to the number of sheets copied in 1 min, by the following; $60 \div (t/10) =$ the number of sheets copied in 1 min In continuous paper feeding, the number of sheets equivalent to (the number of sheets copied in 1 min + 1) can be passed. In this case, 10 in the above formula is replaced with (the number of sheets of the paper fed - 1).

Table 1 (continued)

Item	Contents to be described in specification	Testing method
	b) For 10 CPM or over up to and excluding 100 CPM, express with either of the following: 1) Round off the first decimal place and express with two places of significant digits ○○; 2) Round off the second decimal place and express with three places of significant digits ○○. ○; c) For 100 CPM or over, round off the first decimal place and express with three places of significant digits ○○○.	
1.25 First copy time (time required for copying the first sheet)	Describe the time (second) in the fastest condition from pushing the print button to finishing the ejection of the first copied paper in a normal use condition (A4, 1 : 1 magnification and in standard feeding direction). In the expression of the first copy time, if it differs according to the basic composition of the copying machine or the accessories or mode of the document feeder, it is recommended to record that effect. If the first copy time differs according to the use and mode of the additional functions such as copy density automatic adjustment, document size detection, automatic duplex copying, etc., it is recommended to record that effect and, in addition, to describe the respective values.	Measure the time (second), in the fastest condition, from pushing the print button to finishing the ejection of the first copied paper in a normal use condition.
1.26 Warm up time	Describe the time (minute or second) required for the machine to come to a ready-state from the power-on. When pre-heated, describe that effect together with the time. The temperature and humidity at the warm up time are written in addition to the measured value. Where pre-heated, describe that effect together with the time.	Test a machine allowed to stand as it is until its internal temperature is considered to be equivalent to the ambient temperature. Measure the time from the power-on to the time the machine comes to a state ready for copying. Warm up time test should be carried out in an environment of 20 °C.

Table 1 (continued)

Item	Contents to be described in specification	Testing method
1.27 Power source	In the case of alternating current, describe the voltage (V), frequency (Hz) and current (A). If 50 Hz and 60 Hz are used together, describe that effect. In the case of direct current, describe voltage (V) and current (A).	
1.28 Maximum power consumption	For power consumption, describe the maximum power consumption (kW) at the time of actual use.	Carry out copying in a normal use condition after switching on the power source and measure the maximum power consumption (kW). Except, however, the rush current. When having additional functions for magnification, image density, etc., set the machine so that the power consumption becomes the maximum.
1.29 Energy efficiency rate	For the type of machine regulated by the law concerning the rational use of energy (hereafter referred to as "Energy Efficiency Law"), describe the energy efficiency rate. The unit is (Wh/h) expressed with integer number.	The measurement method specified by the Minister of Economy, Trade and Industry in accordance with article 18 paragraph 1 of the Energy Efficiency Law shall be adopted.
1.30 Extended function	If provided with the extended function such as facsimile, printer, scanner and network, describe these functions.	
1.31 Memory capacity	Describe the memory capacity loaded in standard condition and the memory capacity in maximum which can be loaded. The unit is mega-byte (MB) or giga-byte (GB), etc. Example: Standard 256 MB, maximum 512 MB, HDD 120 GB	
1.32 Main additional functions	Indicate the main additional functions available, if any, such as the both side copying function, automatic colour copying function, image processing, magnification function, binding margin function, editor function and other functions, and write clearly the respective test items, test methods and test results.	The additional functions attached to the body of copying machine are examined by operating the machine in accordance with the using method stated in the catalog, specification, instruction manual and so on as to whether there is abnormality and to other items necessary.