
**Information technology — Office
equipment — Method for measuring
digital copying productivity**

*Technologies de l'information — Équipements de bureau — Méthode
de mesure de la productivité d'un photocopieur numérique*





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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 28, *Office equipment*.

This third edition cancels and replaces the second edition (ISO/IEC 24735:2012), which has been technically revised.

The main changes compared to the previous edition are as follows:

- [Clause 3](#) has been modified to add new definitions and removed definitions of terms not used in the text;
- added “ready delay time” requirement to “test measurement” procedures;
- annex structure has been changed to be consistent with other productivity standards;
- added minimum declaration example to [Annex A](#);
- added [Annex D](#) for the procedure to determine the “ready delay time”.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Introduction

Many digital copying devices produce copied pages at a different rate than their nominal speed when running with different modes (simplex, duplex, copying quality modes), different substrate grammage and collating and/or finishing options. The degree to which a reduction in productivity is experienced depends significantly on other parameters of the job stream. The most dominant of the parameters of the job stream are: the number of original pages in a set to be printed, whether output pages are single-sided or double-sided, image quality modes selected, B&W and colour reproduction job stream, number of print sets to be produced, substrate size used, run length and finishing options.

This document provides a general method for measuring productivity when the above-mentioned job stream parameters for digital copying devices are taken into consideration. This document also includes instructions for the creation of test charts. It allows manufacturers and buyers of digital copying devices to describe the productivity of various digital copying devices with respect to representative office usage.

Information technology — Office equipment — Method for measuring digital copying productivity

1 Scope

This document specifies a method for measuring the digital copying productivity of digital copying devices and multifunctional devices with various copying modes. It is applicable to digital copying devices and multifunctional devices equipped with automatic document feeder (ADF) and collating function. This document is intended to be used for black and white (B&W) as well as colour digital copying devices and multifunctional devices of any underlying marking technology. It allows comparison of the throughput copying rates for a machine operated in various available operating modes (simplex, duplex, size of substrates, 2-up, etc.) and various available digital image processing configurations. This document includes test files, test setup procedures, test procedures, and reporting requirements for digital copying productivity measurements.

This document is not intended to be used for devices which are not able to copy on a media size of A4/8,5" × 11", devices that do not have an ADF, or devices which are not able to collate multiple copies of original prints from a test set.

This document is not intended to replace manufacturer's rated speeds.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 536, *Paper and board — Determination of grammage*

ISO 2470-1, *Paper, board and pulps — Measurement of diffuse blue reflectance factor — Part 1: Indoor daylight conditions (ISO brightness)*

ISO/IEC 24734, *Information technology -- Office equipment--Method for measuring digital printing productivity*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 24734 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

cpm

copies per minute

copying rate, excluding time to first page copied, measured when producing pages in a continuous copying mode for one minute with a single static document using a nominal grammage substrate

Note 1 to entry: Nominal copying speed is expressed in copies per minute or *images per minute (ipm)* (3.5).