

INTERNATIONAL  
STANDARD

**ISO**  
**3272-4**

First edition  
1994-02-01

---

---

**Microfilming of technical drawings and  
other drawing office documents —**

**Part 4:**

Microfilming of drawings of special and  
exceptional elongated sizes

*Micrographie des dessins techniques et autres documents de bureau  
d'études —*

*Partie 4: Micrographie des dessins de formats allongés spéciaux et  
exceptionnels*



Reference number  
ISO 3272-4:1994(E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 3272-4 was prepared by Technical Committee ISO/TC 171, *Micrographics and optical memories for document and image recording, storage and use*.

ISO 3272 consists of the following parts, under the general title *Microfilming of technical drawings and other drawing office documents*:

- *Part 1: Operating procedures*
- *Part 2: Quality criteria and control of 35 mm silver gelatin microfilms*
- *Part 3: Aperture card for 35 mm microfilm*
- *Part 4: Microfilming of drawings of special and exceptional elongated sizes*
- *Part 5: Test procedures for duplicating diazo microfilm images in aperture cards*
- *Part 6: Enlargement from 35 mm microfilm, quality criteria and control*

© ISO 1994

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.

International Organization for Standardization  
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

## Introduction

Drawing offices produce, in addition to drawings, documents which differ in purpose, form and intention. Easy exchanges of such documentation between organizations should be possible without ambiguities arising from the use of the information they contain.

Microfilming enables the information contained in drawing office documents to be reduced to small dimensions thus facilitating survey, transport, handling and storage. Faithful reconstitution of a microform can only be accomplished readily if the microform satisfies precise requirements with respect to dimensions and quality. The quality requirements themselves can be fulfilled readily only if the original document complies with standards for the preparation of drawings for microfilming.

STANDARDSISO.COM : Click to view the full PDF of ISO 3272-4:1994

This page intentionally left blank

STANDARDSISO.COM : Click to view the full PDF of ISO 3272-4:1994

# Microfilming of technical drawings and other drawing office documents —

## Part 4:

### Microfilming of drawings of special and exceptional elongated sizes

#### 1 Scope

This part of ISO 3272 establishes general principles for microfilming drawings of special and exceptional elongated sizes specified in ISO 5457. It is applicable to sequences of microfilmed multiple frame drawings, reduction ratios and frame overlap.

#### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 3272. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 3272 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 3272-1:1983, *Microfilming of technical drawings and other drawing office documents — Part 1: Operating procedures.*

ISO 3272-2:1994, *Microfilming of technical drawings and other drawing office documents — Part 2: Quality criteria and control of 35 mm silver gelatin microfilms.*

ISO 5457:1980, *Technical drawings — Sizes and layout of drawing sheets.*

ISO 6196-1:1993, *Micrographics — Vocabulary — Part 01: General terms.*

ISO 6196-2:1993, *Micrographics — Vocabulary — Part 02: Image positions and methods of recording.*

ISO 6196-3:1983, *Micrographics — Vocabulary — Part 03: Film processing.*

ISO 6196-4:1987, *Micrographics — Vocabulary — Part 04: Materials and packaging.*

ISO 6196-5:1987, *Micrographics — Vocabulary — Part 05: Quality of images, legibility, inspection.*

ISO 6196-6:1992, *Micrographics — Vocabulary — Part 06: Equipment.*

#### 3 Definitions

For the purposes of this part of ISO 3272, the definitions given in ISO 6196 apply.

#### 4 Microfilming in one frame

When microfilming a drawing smaller than 890 mm × 1 210 mm in one frame, it shall be positioned so that the centre of the image is in the centre of the frame. It shall be recorded using the lowest reduction ratio that will allow the whole image to be accommodated within one frame.

## 5 Microfilming in sections

### 5.1 Centring marks

When microfilming the drawings described in clause 4 or drawings too large to be recorded in one frame, centring marks shall be provided at the mid-point of the longer side of each section. Sequential sections shall overlap by at least 100 mm (see figure 1). If originals have important information in the overlap area, the overlap shall be larger than 100 mm. The reduction ratio shall be selected from ISO 3272-1 to maximize the use of the frame area.

### 5.2 Positioning of the document on the camera table

If a document requires rotation when microfilmed in sections, it shall be rotated through 90° in an anti-clockwise direction.

### 5.3 Reduction ratio 1/30

5.3.1 Drawings or individual sheets of multisheet drawings not more than 890 mm in width but more than 1 210 mm in length shall be microfilmed in sections, using multiple frames so that they will appear on the processed microfilm as shown in figure 2.

5.3.2 Drawings or individual sheets of multisheet drawings more than 890 mm but not more than 1 210 mm in width and more than 1 210 mm in length shall be microfilmed in sections, using multiple frames so that they will appear on the processed microfilm as shown in figure 3.

5.3.3 Drawings or individual sheets of multisheet drawings that are more than 1 210 mm in width and more than 1 210 mm in length shall be microfilmed in sections, using multiple frames so that they will appear in the processed microfilm as shown in figure 4.

5.3.4 When drawings or individual sheets of multi-sheet drawings are microfilmed in sections using multiple frames (see figures 2 to 4), no section shall exceed 890 mm by 1 210 mm in size, and there shall be a minimum of 100 mm overlap between adjacent sections. To utilize a full frame for the final section, the overlap may be greater.

### 5.4 Reduction ratio 1/15

5.4.1 Drawings or individual sheets of multisheet drawings not more than 440 mm in width but more than 600 mm in length shall be microfilmed in sections, using multiple frames so that they will appear on the processed microfilm as shown in figure 2.

5.4.2 Drawings or individual sheets of multisheet drawings more than 440 mm but not more than 600 mm in width, and not more than 600 mm in length, shall be microfilmed in sections, using multiple frames so that they will appear on the processed microfilm as shown in figure 3.

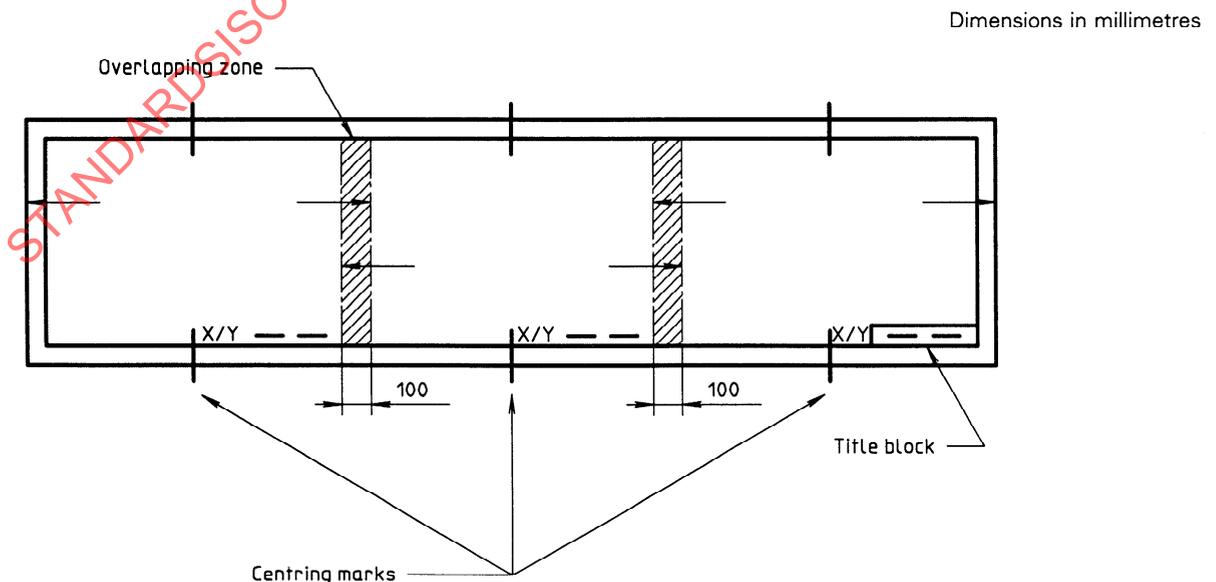


Figure 1 — Centring marks and overlap

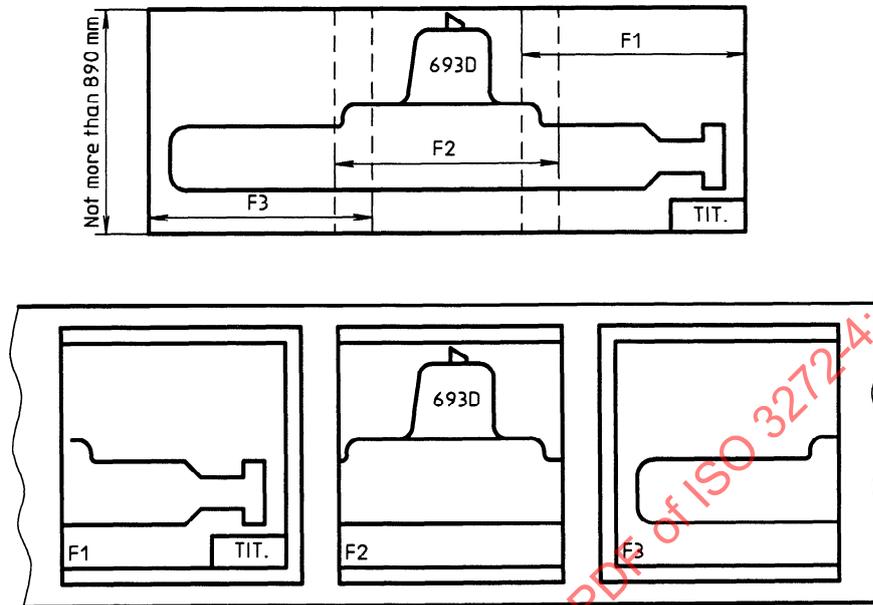


Figure 2 — Multiple frames for formats of not more than 890 mm in width and more than 1 210 mm in length

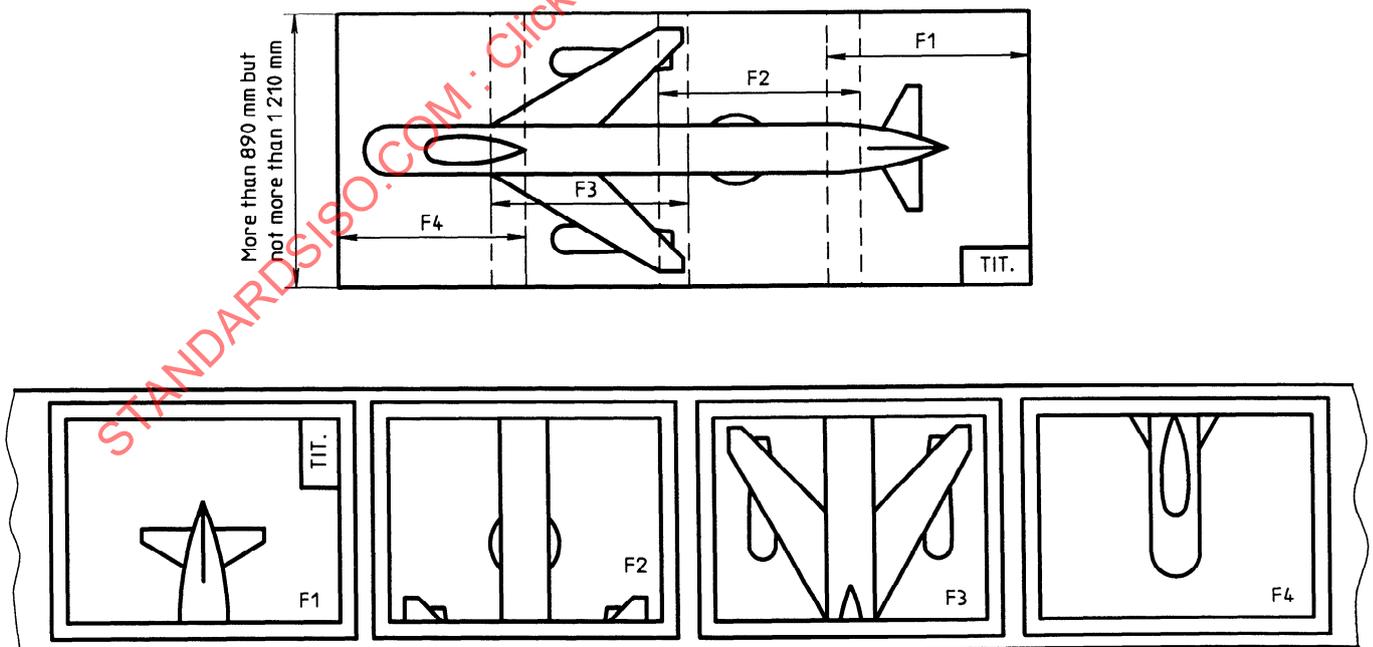


Figure 3 — Multiple frames for formats of more than 890 mm but not more than 1 210 mm in width and more than 1 210 mm in length

**5.4.3** Drawings or individual sheets of multisheet drawings that are more than 600 mm in width and more than 600 mm in length shall be microfilmed in sections, using multiple frames so that they will appear in the processed microfilm as shown in figure 4.

**5.4.4** When drawings or individual sheets of multi-sheet drawings are microfilmed in sections using multiple frames (see figures 2 to 4), no section shall exceed 440 mm by 600 mm in size, and there shall be a minimum of 100 mm overlap between adjacent sections. To utilize a full frame for the final section, the overlap may be greater.

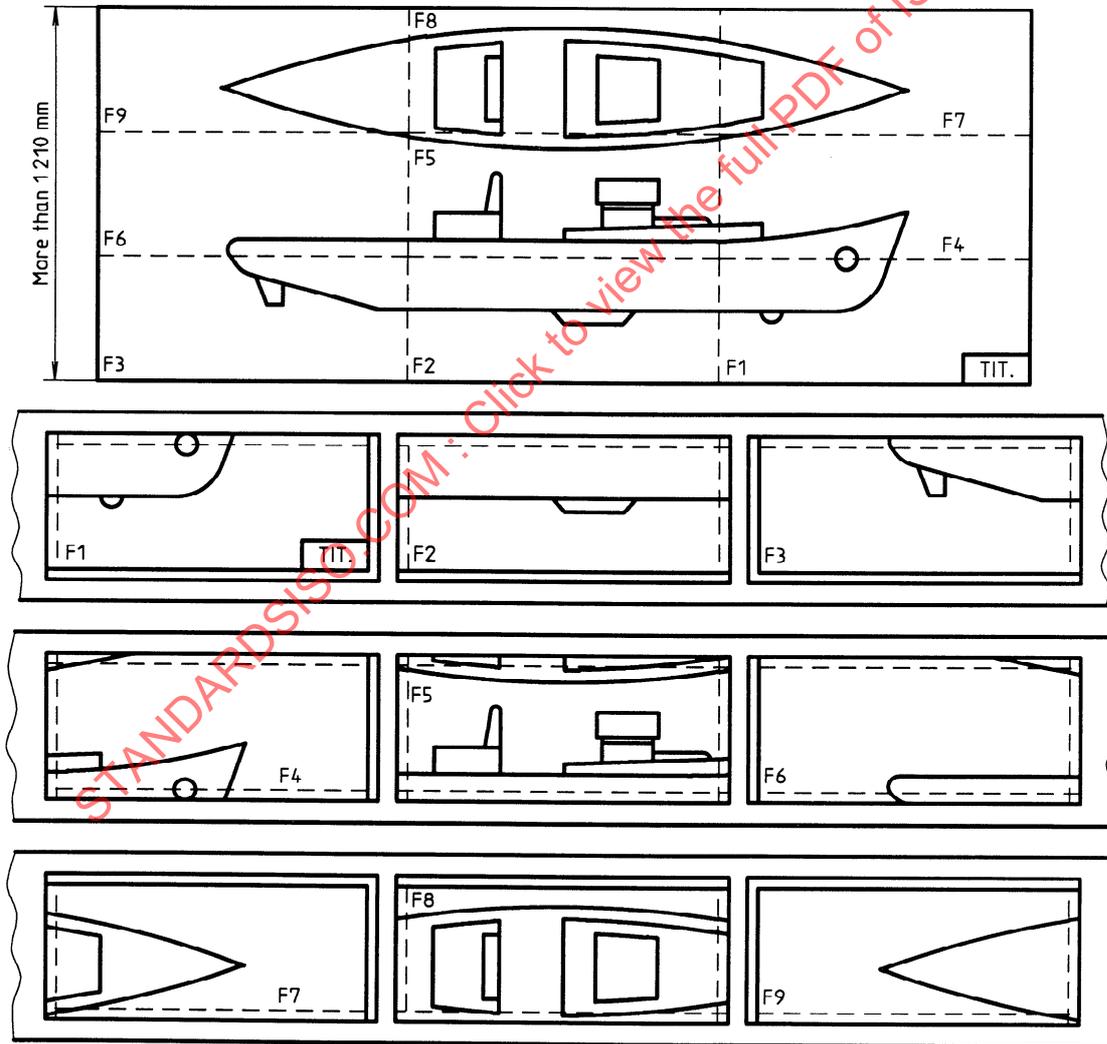
**5.5 Identification**

Each frame of a multiframe series shall be identified by consecutive frame numbers as shown in figures 2

to 4 as well as by the engineering document and sheet number. The first frame of a multiframe series shall be numbered F1 and contain the title block. Succeeding frames shall be numbered F2, F3 etc. Identification characters used in microfilming shall be at least 25 mm in height, shall be white on a dark background and shall be so positioned that they will appear in the lower part of the microfilm frame in an area clear of text.

**6 Non-standard formats**

Other formats shall be treated as the smallest standard size that will accommodate the whole document.



**Figure 4 — Multiple frames for formats of more than 1 210 mm in width and length**

This page intentionally left blank

STANDARDSISO.COM : Click to view the full PDF of ISO 3272-4:1994