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**Photography - Medical radiographic
cassettes/screens/films and hard-copy
imaging films - Dimensions and
specifications**

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- Dimensions and specifications

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 4090:2004 sisaldab Euroopa standardi EN ISO 4090:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.07.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 4090:2004 consists of the English text of the European standard EN ISO 4090:2004.</p> <p>This document is endorsed on 27.07.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This International Standard specifies the nominal sizes, aim dimensions with tolerances, weights, and certain tests for medical radiographic cassettes, screens, and films. It includes medical hard-copy imaging films in the form of sheets, such as laser films and video. This International Standard also includes information regarding the appropriate marking of these products, and special attention is given to cassettes/screens/films used for mammography. This International Standard does not include films in roll format (see informative annex A).</p>	<p>Scope: This International Standard specifies the nominal sizes, aim dimensions with tolerances, weights, and certain tests for medical radiographic cassettes, screens, and films. It includes medical hard-copy imaging films in the form of sheets, such as laser films and video. This International Standard also includes information regarding the appropriate marking of these products, and special attention is given to cassettes/screens/films used for mammography. This International Standard does not include films in roll format (see informative annex A).</p>
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ICS 37.040.25

Võtmesõnad:

ICS 37.040.25

English version

Photography

Medical radiographic cassettes/screens/films
and hard-copy imaging films

Dimensions and specifications

(ISO 4090 : 2001)

Photographie – Cassettes/écrans/
films radiographiques médicaux et
films d'imagerie copie-papier –
Dimensions et spécifications
(ISO 4090 : 2001)

Fotografie – Systeme von Kassetten/
Verstärkungsfolien/Filmen und Auf-
zeichnungsfilm für die medizinische
Radiologie – Maße und Spezifikatio-
nen (ISO 4090 : 2001)

This European Standard was approved by CEN on 2004-02-26.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Management Centre: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 4090 : 2001 Photography – Medical radiographic cassettes/screens/films and hard-copy imaging films – Dimensions and specifications,

which was prepared by ISO/TC 42 'Photography' of the International Organization for Standardization, has been adopted by CEN/CMC as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by October 2004 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 4090 : 2004 was approved by CEN as a European Standard without any modification.

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Introduction

This International Standard is based on a combination and revision of the following five documents:

- ANSI/NAPM ITI. 49-1995, *Photography (Films) — Medical radiographic cassettes/screens/films — Dimensions and specifications*
- IEC 60406:1997, *Cassettes for medical X-ray diagnosis — Radiographic cassettes and mammographic cassettes*
- IEC 60658:1979, *Radiographic intensifying screens for medical use — Dimensions*
- ISO WD1/4090, *Photography — Film Dimensions — Medical radiography*
- ISO WD2/15264, *Photography — Medical hard copy imaging film — Dimensions and specifications*

The aim of this International Standard is to bring together all standardized information about dimensions and related specifications of photographic materials in the form of sheets and related products (screens and cassettes); all of which are intended for use in medical radiography. The worldwide community using radiographic equipment will benefit by having all this information in a single text.

This text of this International Standard is not intended to change the contents of the aforementioned documents, but only to bring them together and to resolve the discordance existing between the different standards or standard projects. The existence of a single International Standard for sheet films and related products will resolve existing differences by converting inch sizes to metric sizes.

Inch nominal sizes and inch dimensions are not found in this International Standard. Informative annex F describes the transition from inch to metric dimensions for the reader. Conversion to metric specifications has resulted in a potentially confusing situation. Use of the same nominal dimension (20 × 40 and 20 × 25, for example) might imply to the reader that the aims and tolerances should be identical. In some cases, where one size is of inch origin and the other is of metric origin, this is not true. Therefore, TC 42 agreed that it would be best to separate tables into sizes of metric origin versus sizes of inch origin.

By combining the existing documents and the dimensional tables, the reader can now easily compare sizes of films, screens and cassettes — all in a glance. Combination has also facilitated a significant comparison of preferred and recognized sizes, as well as a reconciliation of whether films and screens properly fit inside their corresponding cassettes. This comparison has resulted in a significant improvement in the agreement between sizes, as well as component “fit”.

This International Standard refers to mammography cassettes as either preferred sizes or recognized sizes. All new mammography cassettes must conform to the dimensions given as “preferred”. The dimensions given for recognized sizes are listed in order to inform the reader regarding an older style of mammography cassettes. Although the older style cassettes are no longer preferred (no longer the industry standard), use of this style throughout the world is expected to continue for some time. So, they are listed here as “recognized” only.

Medical radiographic films in roll form are not a part of this International Standard. Use of roll films appears well established and stable, but does not justify a new, stand-alone standard. In order to assist the reader, information regarding roll films is listed in informative annex A.

Annexes G, H and I provide information on the dimensional stability of film, quantity packaging and sizes of inch origin (film dimension exceptions), respectively.

1 Scope

This International Standard specifies the nominal sizes, aim dimensions with tolerances, weights, and certain tests for medical radiographic cassettes, screens, and films. It includes medical hard-copy imaging films in the form of sheets, such as laser films and video.

This International Standard also includes information regarding the appropriate marking of these products, and special attention is given to cassettes/screens/films used for mammography.

This International Standard does not include films in roll format (see informative annex A).

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

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

IEC 61267:1994, *Medical diagnostic X-ray equipment — Radiation conditions for use in the determination of characteristics.*

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

3.1

preferred mammography sizes

current industry standard, reflecting modern industry trends

NOTE Aim and tolerance dimensions are different for preferred sizes versus recognized sizes.

3.2

recognized mammography sizes

former industry standard, listed because this older format is expected to be used in clinical applications worldwide for some time to come