# SVENSK STANDARD SS-EN IEC 63077



Fastställd 2020-04-15

Utgåva 1 Sida 1 (1+18) Ansvarig kommitté SEK TK 62BC

© Copyright SEK Svensk Elstandard. Reproduction in any form without permission is prohibited.

# God praxis för renovering av medicinsk bildgivande utrustning

Good refurbishment practices for medical imaging equipment

Som svensk standard gäller europastandarden EN IEC 63077:2019. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 63077:2019.

# Nationellt förord

Europastandarden EN IEC 63077:2019

består av:

- europastandardens ikraftsättningsdokument, utarbetat inom CENELEC
- IEC 63077, First edition, 2019 Good refurbishment practices for medical imaging equipment utarbetad inom International Electrotechnical Commission, IEC.

ICS 11.040.55

### Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

# SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

#### Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

### Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1284 164 29 Kista Tel 08-444 14 00 www.elstandard.se

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

**EN IEC 63077** 

December 2019

ICS 11.040.55

# **English Version**

# Good refurbishment practices for medical imaging equipment (IEC 63077:2019)

Bonnes pratiques de reconditionnement pour les appareils d'imagerie médicale (IEC 63077:2019)

Sachgemäße Verfahren zur Aufarbeitung von medizinischen bildgebenden Geräten (IEC 63077:2019)

This European Standard was approved by CENELEC on 2019-12-18. CENELEC 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 CEN-CENELEC Management Centre or to any CENELEC member.

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

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2019 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

# **European foreword**

The text of document 62B/1149/FDIS, future edition 1 of IEC 63077, prepared by SC 62B "Diagnostic imaging equipment" of IEC/TC 62 "Electrical equipment in medical practice" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63077:2019.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-12-18

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

# **Endorsement notice**

The text of the International Standard IEC 63077:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60601-1:2005 NOTE Harmonized as EN 60601-1:2006 (not modified)
IEC 62353:2014 NOTE Harmonized as EN 62353:2014 (not modified)

# **Annex ZA**

(normative)

# Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
ISO 13485	-	Medical devices Quality management systems Requirements for regulatory purposes	EN ISO 13485	2016
-	-		+ AC	2018
ISO 14971	2007	Medical devices Application of risk management to medical devices	-	-

# CONTENTS

F	DREW	ORD	3		
IN	TROD	DUCTION	5		
1	Sco	ppe	6		
2	Nor	mative references	6		
3	Terms and definitions				
4	General requirements for REFURBISHMENT of USED MEDICAL IMAGING EQUIPMENT				
	4.1	Quality management system	9		
	4.2	Resource management			
	4.3	Corrective and preventive action	9		
	4.4	Customer complaints	9		
	4.5	Production and service provision	9		
	4.6	Control of nonconforming PRODUCT	10		
	4.7	Post-market surveillance PROCESS	10		
	4.8	Document control	10		
	4.9	Purchasing	10		
	4.10	Control of design and design changes	10		
	4.11	RISK management PROCESS	10		
5	Spe	ecific requirements for good REFURBISHMENT practice	11		
	5.1	General	11		
	5.2	Selection of MEDICAL IMAGING EQUIPMENT for REFURBISHMENT	11		
	5.3	Evaluating market access requirements	11		
	5.4	Preparation for REFURBISHMENT, disassembly, packing, and transport	11		
	5.5	Planning	11		
	5.6	Installation of software and hardware to ensure the safety of the MEDICAL			
		IMAGING EQUIPMENT			
	5.7	Performance and safety test	12		
	5.8	Packing, transport, and installation of refurbished MEDICAL IMAGING EQUIPMENT	12		
	5.9	Record of REFURBISHMENT			
	5.10	REFURBISHMENT label			
Αı		(informative) Cross reference list of the contents of IEC 63077 versus			
		) 13485	13		
Bi	bliogra	aphy	15		
	_	defined terms used in this document			
T۶	able A	.1 – Cross reference list of the contents of IEC 63077 versus ISO 13485	13		

# INTERNATIONAL ELECTROTECHNICAL COMMISSION

# GOOD REFURBISHMENT PRACTICES FOR MEDICAL IMAGING EQUIPMENT

# **FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 63077 has been prepared by subcommittee 62B: Diagnostic imaging equipment, of IEC technical committee 62: Electrical equipment in medical practice.

This first edition cancels and replaces the second edition of IEC PAS 63077 published in 2016. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC PAS 63077:2016:

- a) the scope was delineated more clearly;
- b) an informative cross reference list of IEC 63077 vs ISO 13485 (Annex A) was added;
- c) smaller corrections were performed.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
62B/1149/FDIS	62B/1155/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this document, the following print types are used:

- requirements and definitions: roman type;
- informative material appearing outside of tables, such as notes, examples and references: in smaller type.
   Normative text of tables is also in a smaller type;
- TERMS DEFINED IN CLAUSE 3: SMALL CAPITALS.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- · reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

# INTRODUCTION

This document specifies requirements for a quality management system that can be used by organizations involved in REFURBISHMENT of MEDICAL IMAGING EQUIPMENT.

The requirements defined in this document can be used by MANUFACTURERS or organizations providing REFURBISHMENT. Organizations providing REFURBISHMENT can voluntarily choose to conform to the requirements of this document or can be required by contract with the MANUFACTURER of the MEDICAL IMAGING EQUIPMENT to conform.

Several jurisdictions have regulatory requirements regarding refurbished MEDICAL IMAGING EQUIPMENT e.g. regarding the import and making refurbished MEDICAL IMAGING EQUIPMENT available. These regulatory requirements differ from nation to nation and region to region. The organizations involved in REFURBISHMENT of MEDICAL IMAGING EQUIPMENT should understand how the regulatory requirements in the several jurisdictions will be interpreted and may be met by applying this document.

In some jurisdictions a definition of the term remanufacturer is available. This document does not cover the topic of how organizations are acting in the role of a remanufacturer.

This document can also be used by internal and external parties, including certification bodies, to assess the organization's ability to meet requirements applicable for the REFURBISHMENT of MEDICAL IMAGING EQUIPMENT.

It is emphasized that the requirements specified in this document are complementary to other International Standards such as on quality management system and on RISK management.

There is a wide variety of medical equipment with different requirements on REFURBISHMENT. Therefore, this document only applies to named groups of MEDICAL IMAGING EQUIPMENT. These groups are defined in Clause 1 Scope.

# GOOD REFURBISHMENT PRACTICES FOR MEDICAL IMAGING EQUIPMENT

# 1 Scope

This document describes and defines the PROCESS of REFURBISHMENT of USED MEDICAL IMAGING EQUIPMENT and applies to the restoring of USED MEDICAL IMAGING EQUIPMENT to a condition of safety and performance comparable to that of new MEDICAL IMAGING EQUIPMENT i.e. MEDICAL IMAGING EQUIPMENT that was not in use. This restoration includes actions such as REPAIR, REWORK, software/hardware updates, and the replacement of worn parts with original parts. This document enumerates the actions, that are performed, and the manner consistent, with relevant specifications and service procedures required to ensure that the REFURBISHMENT of MEDICAL IMAGING EQUIPMENT is done without changing the finished MEDICAL IMAGING EQUIPMENT's performance, safety specifications, or INTENDED USE according to its original or applicable valid registration.

The MEDICAL IMAGING EQUIPMENT and systems covered by this document include:

- X-RAY EQUIPMENT:
- X-RAY EQUIPMENT for RADIOSCOPICALLY GUIDED INTERVENTIONAL PROCEDURES;
- X-RAY EQUIPMENT FOR COMPUTED TOMOGRAPHY;
- MAGNETIC RESONANCE EQUIPMENT;
- ULTRASONIC DIAGNOSTIC EQUIPMENT;
- GAMMA CAMERAS;
- PLANAR WHOLEBODY IMAGING EQUIPMENT;
- equipment for SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY (SPECT);
- SPECT/CT hybrid systems, combining a GAMMA CAMERA with X-RAY EQUIPMENT FOR COMPUTED TOMOGRAPHY (CT);
- POSITRON EMISSION TOMOGRAPHS (PET);
- PET/CT hybrid systems combining a POSITRON EMISSION TOMOGRAPH with X-RAY EQUIPMENT FOR COMPUTED TOMOGRAPHY (CT);
- PET/MRI hybrid systems combining a POSITRON EMISSION TOMOGRAPH with MAGNETIC RESONANCE EQUIPMENT; and
- other combinations of the MEDICAL IMAGING EQUIPMENT or systems listed above.

This document does not apply to endoscopic equipment, funduscopic equipment, radiation therapy equipment, nor associated systems.

#### 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 13485:2016, Medical devices – Quality management systems – Requirements for regulatory purposes

ISO 14971:2007, Medical devices – Application of risk management to medical devices