BS EN 62552:2013

BSI Standards Publication

Household refrigerating appliances — Characteristics and test methods

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National foreword

This British Standard is the UK implementation of EN 62552:2013. It is derived from IEC 62552:2007, incorporating corrigendum March 2008. It supersedes BS EN 153:2006 and BS EN ISO 15502:2005, which are withdrawn.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by IEC corrigendum March 2008 is indicated in the text by [AC1] 〈AC1〉.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags [C] 〈C〉.

The UK participation in its preparation was entrusted by Technical Committee CPL/59, Performance of household electrical appliances, to Subcommittee CPL/59/13, Performance of refrigeration.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Date	Text affected

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EN 62552

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English version

Household refrigerating appliances - Characteristics and test methods

(IEC 62552:2007, modified + corrigendum Mar. 2008)

Appareils de réfrigération à usage ménager - Caractéristiques et méthodes d'essai (CEI 62552:2007, modifiée + corrigendum Mar. 2008)

Haushalt-Kühl-/Gefriergeräte - Eigenschaften und Prüfverfahren (IEC 62552:2007, modifiziert + corrigendum Mar. 2008)

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

This document (EN 62552:2013) consists of the text of IEC 62552:2007 + corrigendum 2008 prepared by IEC/TC 59 "Performance of household and similar electrical appliances", together with the common modifications prepared by CLC/TC 59X "Performance of household and similar electrical appliances".

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2013-10-22
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2015-10-22

This document supersedes EN 153:2006 and EN ISO 15502:2005 + AC:2007.

EN 62552:2013 includes the following significant technical changes with respect to EN 153:2006 and EN ISO 15502:2005:

– new compartment: zero star;

– new compartment: wine storage, combined with requirements for vibration, temperature fluctuation and humidity;

– new compartment: pantry;

– new compartment: multi-use;

– new compartment: through-the-door-devices;

– requirements for circumvention.

EN ISO 15502:2005 + AC:2007, *Household refrigerating appliances – Characteristics and test methods*, is based on ISO 15502:2005 and its corrigendum Cor 1:2007; this International Standard, prepared by subcommittee 5: Testing and rating of household refrigeration appliances of ISO technical committee 86, Refrigeration and air-conditioning, was transferred to the IEC subsequent to IEC SMB decision 127/11. ISO 15502:2005 and its corrigendum are superseded by IEC 62552:2007.

EN 153:2006, *Methods of measuring the energy consumption of electric mains operated household refrigerators, frozen food storage cabinets, food freezers and their combinations, together with associated characteristics*, was prepared by CEN/TC 44, Household refrigerating appliances and commercial refrigeration equipment.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62552:2007 are prefixed “Z”.

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 62552:2007 + corrigendum 2008 was approved by CENELEC as a European Standard with the following common modifications.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
ISO 534	-	Paper and board - Determination of thickness, density and specific volume	EN ISO 534	-

Annex ZB
(normative)

Final test report layout

Test report – Household refrigeration appliance (Requirements from EN 62552 and 2010/30/EU)	**Date:** mm / dd / yyyy **Testing Institute:** Science Lab Ltd. Anywhere Outinavillage Country	**Appliance type:** **Manufacturer:** **Tested by:**	SomeFreezer SF1234 Man-U-Fact Ltd. Somewhere Inthecity Country xyz

Supplier name:	Man-U-Fact Ltd.
Appliance model:	SomeFreezer SF1234
Category[1]:	7

Efficiency class[2]:	A+++	**Eco-label award (1980/2000 EC):**	n.a.
Built-in Appliance:	yes/no	**Climate Class[3]:**	SN-ST

Overall dimensions[4] [mm]:	1234	x	1234	x	1234
Overall space required in use[4] [mm]:	2345	x	2345	x	2345

ALL APPLIANCES:	*Decl.*	*Tested*
Total gross volume [L]:	1234	1234
Total storage volume [L]:	2345	2345
Storage shelf area [cm²]:	3456	3456

WINE COOLERS:	*Decl.*	*Tested*
Bottle capacity [pcs]:	n.a.	1234
Temp. fluctuation test passed:		yes/no
Humidity range test passed:		yes/no

Com-part-ments	*Type*	*Frost Free*	*Star rating*	*Vol. [L]:*	*Target storage temp. [°C]*	*Storage test passed?*		*Ope-ning force Test passed?*	*Air-tight-ness test passed?*	*Durab-ility test passed?*	*Mech. Strength test passed?*
						High temp.	*Low temp.*				
1	(***)*-Freezer	No	4	123	≤ -18	yes	Yes	yes/no	yes/no	yes/no	yes/no
2	***-Freezer	Yes	3	123	≤ -18	yes	no	yes/no	yes/no	yes/no	yes/no
3	**-Freezer	Yes	2	123	≤ -12			yes/no	yes/no	yes/no	yes/no
4	*-Freezer	No	1	123	≤ -6			yes/no	yes/no	yes/no	yes/no
5	0-star	n.a.	n.a.	n.a.	-6 ≤ 0			yes/no	yes/no	yes/no	yes/no
6	Chill	n.a.	n.a.	n.a.	-2 ≤ 3			yes/no	yes/no	yes/no	yes/no
7	Fresh Food	n.a.	n.a.	n.a.	0 ≤ +4			yes/no	yes/no	yes/no	yes/no
8	Wine	n.a.	n.a.	n.a.	+5 ≤ 20			yes/no	yes/no	yes/no	yes/no
9	Cellar	n.a.	n.a.	n.a.	+8 ≤ +14			yes/no	yes/no	yes/no	yes/no
10	Pantry	n.a.	n.a.	n.a.	+14 ≤ +20			yes/no	yes/no	yes/no	yes/no

	Tested	*Passed?*
Energy consumption 24h [kWh]	12,345	yes/no
Energy consumption 365d [kWh]	123,456	yes/no
Energy efficiency index [%]	123	yes/no
Energy efficiency class	A+++	yes/no
Ice production in 24h [kg]	n.a.	yes/no
Circumvention measures found?		yes/no*

	Tested	*Passed*
Temperature rise time [h]	12	yes/no
Freezing capacity 24h [kg]	1	yes/no
Lowest ambient temp. [°C]	123	yes/no
Noise [dB(A)]	12,3	yes/no

Every field has to be filled, either with data or “n.a.”

Annex ZZ
(informative)

Coverage of requirements of commission regulation (EC) No 643/2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances.

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant requirements as given in Commission Regulation (EC) No 643/2009 of 22 July 2009, implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances and Commission Delegated Regulation (EU) No 1060/2010 from 28 September 2010, supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to ecodesign requirements for refrigeration appliances especially:

- ensuring that the prospective harmonized standard provides, where appropriate, revised and/or new definitions, characteristics and necessary parameters included in Regulation 643/2009 and in the Draft Labeling Directive, in particular for appliances and compartments to be used exclusively for wine storage, or with internal temperature between +14 °C and +20 °C, as well as for compartments with internal temperature between 0 °C and -6 °C;
- ensuring that the prospective harmonized standard(s) provides procedures and methods to measure at least the linear dimensions, areas and volumes, energy consumption, storage temperatures, compartments start ratings, freezing capacity, temperature rise time of free-standing and built-in household refrigerating appliances included in Regulation 643/2009 and the Draft Labeling Directive;
- ensuring that, for the purpose of Regulation 643/2009 appliances equipped for operation on different power supplies, but that can be operated at a rated voltage within the range between 220 V and 240 V, are tested only at 230 V ±1 % with a frequency of 50 Hz ±1 %;
- ensuring that the prospective harmonized standard includes a procedure that avoids an appliance being programmed to recognize the test conditions and reacting specifically to them;
- ensuring that the prospective harmonized standard takes into account improved test conditions, test materials, new appliance types and the state of the art at European and international level and better reflects the user behavior;
- defining a template for a test report indicating the information to be declared by the manufacturers to fulfill at least the ecodesign requirements set out in Regulation 643/2009 and in the Draft Labeling Directive.

WARNING: Other requirements and other EC Directives or Commission Regulations may be applicable to the products falling within the scope of this standard.

CONTENTS

HOUSEHOLD REFRIGERATING APPLIANCES – CHARACTERISTICS AND TEST METHODS

1 Scope

This International Standard specifies the essential characteristics of household refrigerating appliances, factory-assembled and cooled by internal natural convection or forced air circulation, and establishes test methods for checking the characteristics. These are type tests, and because of this, when verification of the performance of a refrigerating appliance of a given type in relation to this standard is necessary, it is preferable, wherever practicable, that all the tests specified be applied to a single unit. The tests can also be made individually for the study of a particular characteristic.

NOTE For the safety requirements applicable to household refrigerating appliances, see IEC 60335-2-24; for noise requirements applicable to household refrigerators and freezers, see ISO 8960; and for additional safety requirements applicable to the refrigerating systems of household refrigerating appliances, see ISO 5149.

2 Normative references

The following referenced documents are indispensable for the application 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 534, *Paper and board – Determination of thickness, density and specific volume*

〖C〉 *text deleted* 〈C〗

〖C〉 *text deleted* 〈C〗

3 Terms, definitions and symbols

For the purposes of this document, the following terms, definitions and symbols apply.

3.1
refrigerating appliance
factory-assembled insulated cabinet with one or more compartments and of suitable volume and equipment for household use, cooled by natural convection or a frost-free system whereby the cooling is obtained by one or more energy-consuming means

NOTE From the point of view of installation, there are various types of household refrigerating appliance (free-standing, wall-mounted, built-in, etc.).

3.1.1
compression-type refrigerating appliance
refrigerating appliance in which refrigeration is effected by means of a motor-driven compressor

3.1.2
absorption-type refrigerating appliance
refrigerating appliance in which refrigeration is effected by an absorption process using heat as energy source

3.1.3
refrigerator
refrigerating appliance intended for the preservation of food, one of whose compartments is suitable for the storage of fresh food