This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN ISO 20361:2009

Liquid pumps and pump units - Noise test code - Grades 2 and 3 of accuracy (ISO 20361:2007)

© NSAI 2009 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

I.S. EN ISO 20361:2009

Incorporating amendments/corrigenda/National Annexes issued since publication:
EN ISO 20361:2009/AC:2010

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:	*This document is based on:*	*Published:*
EN 12639:2000	EN ISO 20361:2009 EN 12639:2000	22 April, 2009 16 February, 2000

This document was published
under the authority of the NSAI
and comes into effect on:
10 July, 2009

ICS number:
17.140.20
23.080

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

I.S. EN ISO 20361:2009

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 20361:2009/AC

July 2010
Juillet 2010
Juli 2010

ICS 17.140.20; 23.080

English version
Version Française
Deutsche Fassung

Liquid pumps and pump units - Noise test code - Grades 2 and 3 of accuracy (ISO 20361:2007)

Pompes et groupes motopompes pour liquides - Code d'essai acoustique - Classes de précision 2 et 3 (ISO 20361:2007)

Flüssigkeitspumpen und -pumpenaggregate - Geräuschmessung - Genauigkeitsklassen 2 und 3 (ISO 20361:2007)

This corrigendum becomes effective on 7 July 2010 for incorporation in the three official language versions of the EN.

Ce corrigendum prendra effet le 7 juillet 2010 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 7.Juli 2010 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2010 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.
Tous droits d'exploitation sous quelque forme et de quelque manière que ce soit réservés dans le monde entier aux membres nationaux du CEN.
Alle Rechte der Verwertung, gleich in welcher Form und in welchem Verfahren, sind weltweit den nationalen Mitgliedern von CEN vorbehalten.

Ref. No.:EN ISO 20361:2009/AC:2010 D/E/F

This is a free page sample. Access the full version online.

1 Modification to Annex ZB

In the 2nd paragraph, replace "Communities" *with* "Union" *and replace* "compliance with the clauses of this standard given in table ZB confers" *with* "compliance with the normative clauses of this European Standard confers".

2 Modification to Annex ZC

In the 2nd paragraph, replace "Communities" *with* "Union" *and replace* "compliance with the clauses of this standard given in table ZC confers" *with* "compliance with the normative clauses of this European Standard confers".

This is a free page sample. Access the full version online.

I.S. EN ISO 20361:2009

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 20361

April 2009

ICS 17.140.20; 23.080

Supersedes EN 12639:2000

English Version

Liquid pumps and pump units - Noise test code - Grades 2 and 3 of accuracy (ISO 20361:2007)

Pompes et groupes motopompes pour liquides - Code d'essai acoustique - Classes de précision 2 et 3 (ISO 20361:2007)

This European Standard was approved by CEN on 10 April 2009.

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 CEN Management Centre or to any CEN 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 CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2009 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 20361:2009: E

This is a free page sample. Access the full version online.

Contents

Page

This is a free page sample. Access the full version online.

Foreword

The text of ISO 20361:2007 has been prepared by Technical Committee ISO/TC 115 “Pumps” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 20361:2009 by Technical Committee CEN/TC 197 “Pumps” the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

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

This document supersedes EN 12639:2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directives.

For relationship with EC Directives, see informative Annexes ZB and ZC, which are integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 20361:2007 has been approved by CEN as a EN ISO 20361:2009 without any modification.

NOTE Normative references to International Standards are listed in annex ZA (normative).

This is a free page sample. Access the full version online.

Annex ZA
(normative)

Normative references to international publications with their following European publications

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.

Standard	Year	Title	EN	Year
ISO 3743-1[1)]	1994	Acoustics — Determination of sound power levels of noise sources — Engineering methods for small, movable sources in reverberant fields — Part 1: Comparison method in hard-walled test rooms	1995	EN ISO 3743-1
ISO 3743-2	1994	Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering methods for small, movable sources in reverberant fields — Part 2: Methods for special reverberation test rooms	1996	EN ISO 3743-1
ISO 3744[2)]	1994	Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane	1995	EN ISO 3744
ISO 3746[3)]	1995	Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane	1995	EN ISO 3746
ISO 4871	1996	Acoustics — Declaration and verification of noise emission values of machinery and equipment	1996	EN ISO 4871
ISO 9614-1	1993	Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points	1995	EN ISO 9614-1
ISO 9614-2	1996	Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning	1996	EN ISO 9614-2

1) To be published (Revision of ISO 3743-1:1994)

2) To be published (Revision of ISO 3744:1994)

3) To be published (Revision of ISO 3746:1995)

This is a free page sample. Access the full version online.

Standard	Year	Title	EN	Year
ISO 11203	1995	Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at the work station and at other specified positions from the sound power level	1995	EN ISO 11203
ISO 12100-1	2003	Safety of machinery — Basic concepts, general principles for design — Part 1 : Basic terminology, methodology	2003	EN ISO 12100-1
ISO 12100-2	2003	Safety of machinery — Basic concepts, general principles for design — Part 2 : Technical principles (EN ISO 12100-2)	2003	EN ISO 12100-2
ISO 17769	2008	Liquid pumps – General terms and installation – Definitions, quantities, letter symbols and units	2000	EN 12723

This is a free page sample. Access the full version online.

Annex ZB
(informative)

Relationship between this European Standard and the Essential Requirements of EC Directive of EU Directive 98/37/CE

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association] to provide a means of conforming to Essential Requirements of the New Approach Directive 98/37/EC, amended by 98/79/EC

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard given in table ZB confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EC Directives may be applicable to the product(s) falling within the scope of this standard.

This is a free page sample. Access the full version online.

Annex ZC
(informative)

Relationship between this European Standard and the Essential Requirements of Directive EU Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard given in table ZC confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EC Directives may be applicable to the product(s) falling within the scope of this standard.

This is a free page sample. Access the full version online.

This page is intentionally left BLANK.

This is a free page sample. Access the full version online.

I.S. EN ISO 20361:2009

INTERNATIONAL STANDARD

ISO 20361

First edition
2007-02-01

Corrected version
2007-04-01

Liquid pumps and pump units — Noise test code — Grades 2 and 3 of accuracy

Pompes et groupes motopompes pour liquides — Code d'essai acoustique — Classes de précision 2 et 3

Reference number
ISO 20361:2007(E)

© ISO 2007

This is a free page sample. Access the full version online.

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2007

All rights reserved. Unless otherwise specified, 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 either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a free page sample. Access the full version online.

Contents

Page

© ISO 2007 – All rights reserved

This is a free page sample. Access the full version online.

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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

ISO 20361 was prepared by Technical Committee ISO/TC 115, *Pumps*.

This corrected version of ISO 20361:2007 incorporates the removal of “FDIS” from the footer on the cover page and from the header on succeeding pages.

© ISO 2007 – All rights reserved

This is a free page sample. Access the full version online.

Introduction

The noise emitted by a pump unit can be radiated by the casing of the pump, the driving system (e.g. motor, gear box, coupling), the piping system and all the connected structures.

On site, the perceived noise can be significantly increased by reverberation effects or by the radiation of extraneous sources.

Depending on the type of pump it may be useful to know

a) the noise of the pumping system (including piping);

b) the noise of the pump unit, including the driver and the transmission elements but excluding the noise of the piping system;

c) the noise emitted by the pump alone, excluding the noise from the driver, transmission elements and the pipings;

d) the noise emitted by each of those elements in respect to a given requirement or in view of an efficient sound proofing of the installation.

This International Standard describes methods for the determination of the noise emitted by a pump unit [case b)] or a pump alone [case c)]. Noise emission is expressed in terms of the sound power level of the machine and the emission sound pressure level at the relevant work station (see 6.2).

This International Standard is intended to enable the manufacturer to

— show the effectiveness of noise reduction,

— declare the noise emission levels.

This International Standard is a type C standard as stated in ISO 12100-1 and ISO 12100-2.

When provisions of this type C standard are different from those which are stated in A or B standards, the provisions of this type C standard take precedence.

The machinery concerned and the extent to which noise is covered are indicated in the scope of this International Standard.

© ISO 2007 – All rights reserved

This is a free page sample. Access the full version online.

This is a free page sample. Access the full version online.

Liquid pumps and pump units — Noise test code — Grades 2 and 3 of accuracy

1 Scope

This International Standard specifies all the information necessary to carry out efficiently and under standardized conditions the determination, declaration and verification of the airborne noise emission of liquid pumps or pump units (see 4.1). It specifies the noise measurement methods and the operating and mounting conditions that shall be used for the test.

Noise emission characteristics include emission sound pressure levels at specified positions and the sound power level. The determination of these quantities is necessary for

— declaring the noise emission values,

— purpose of noise control at source at the design stage.

NOTE 1 The determination of these quantities is also necessary for comparing the noise emitted by liquid pumps on the market.

The use of this International Standard ensures the reproducibility of the determination of the airborne noise-emission characteristics within specified limits determined by the grade of accuracy of the basic airborne noise measurement method used. Noise measurement methods according to this International Standard are engineering methods (grade 2) and survey methods (grade 3).

This International Standard does not deal with the characterization of the structure-borne sound and liquid-borne noise generated by liquid pumps.

NOTE 2 This International Standard is intended to complement EN 809, *Pumps and pump units for liquids — Common safety requirements*.

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 3743-1[1)], *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering method for small, movable sources in reverberant fields — Part 1: Comparison method for a hard-walled test room*

ISO 3743-2, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering methods for small, movable sources in reverberant fields — Part 2: Methods for special reverberation test rooms*

ISO 3744[2)], *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane*

1) To be published. (Revision of ISO 3743-1:1994)

2) To be published. (Revision of ISO 3744:1994)

© ISO 2007 – All rights reserved

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation