Irish Standard
I.S. EN 14359:2017

Gas-loaded accumulators for fluid power applications

I.S. EN 14359:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

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

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National Foreword

I.S. EN 14359:2017 is the adopted Irish version of the European Document EN 14359:2017, Gas-loaded accumulators for fluid power applications

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14359

April 2017

ICS 23.100.99

Supersedes EN 14359:2006+A1:2010

English Version

Gas-loaded accumulators for fluid power applications

Accumulateurs hydropneumatiques pour transmissions hydrauliques

Hydrospeicher für Hydraulikanwendungen

This European Standard was approved by CEN on 2 January 2017.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 14359:2017) has been prepared by Technical Committee CEN/TC 54 “Unfired pressure vessels”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by October 2017 and conflicting national standards shall be withdrawn at the latest by October 2017.

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 14359:2006+A1:2010.

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 EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

In comparison with EN 14359:2006+A1:2010, the following modifications have been made:

— In general, references have been aligned to the new Pressure Equipment Directive 2014/68/EU;

— the Scope has been broadened so as not to specifically exclude accumulators containing Group 1 liquids or gases;

— 'Table 3 - Allowable design stress values for fine grained and heat treated steels' has been added;

— in subclause 7.6, Fatigue performance evaluation, the normative text has been refined;

— more information is provided in the informative Annexes C to F;

— in the Annexes: Conformity assessment modules and activities have been removed from this edition;

— informative Annexes B and ZA have been updated to take into account the new Pressure Equipment Directive 2014/68/EU.

Where appropriate, formulae and techniques are consistent with the requirements of EN 13445-3 but this European Standard is presumed to satisfy the essential requirements of the Pressure Equipment Directive 2014/68/EU in its own right.

NOTE If any matter of interpretation or doubt arises as to the meaning or effect of any normative part of this European Standard, or as to whether anything should be done or has been omitted to be done, in order that this European Standard should be complied with in full, the matter needs to be referred to the CEN/TC 54 Committee.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

1.1 This European Standard specifies the requirements for materials, design, manufacture, testing inspection, safety equipment configuration and documentation (including instructions for first operation), for commonly-used types of gas-loaded accumulators and pressure vessels used to provide additional gas capacity for fluid power applications (see 1.2).

1.2 This European Standard applies to the following types of components, defined as the pressure-containing envelope of gas-loaded accumulators:

— bladder type;

— diaphragm type;

— piston type;

— transfer type;

— pressure vessels used to provide additional gas capacity.

They consist of one or several parts joined together by a variety of mechanical means and by welding.

1.3 This European Standard applies to gas-loaded accumulators which operate with the following conditions:

— subject to an internal gauge pressure greater than 0,5 bar;

— working temperature not lower than –50 °C and not higher than +200 °C;

— containing all liquids and gases as defined in the Pressure Equipment Directive 2014/68/EU, see Note.

NOTE When the accumulator contains Group 1 liquids or gases, consideration relating to risks other than those required by Pressure Equipment Directive 2014/68/EU are not covered by this European Standard and will be assessed separately.

2 Normative references

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.

EN 10204, *Metallic products - Types of inspection documents*

EN 13018, *Non-destructive testing - Visual testing - General principles*

EN 13445-2, *Unfired pressure vessels - Part 2: Materials*

EN 13445-3:2014, *Unfired pressure vessels - Part 3: Design*

EN 13445-4, *Unfired pressure vessels - Part 4: Fabrication*

EN ISO 148-1, *Metallic materials - Charpy pendulum impact test - Part 1: Test method (ISO 148-1)*