Irish Standard
I.S. EN ISO 4126-3:2020

Safety devices for protection against excessive pressure - Part 3: Safety valves and bursting disc safety devices in combination (ISO 4126-3:2020)

I.S. EN ISO 4126-3:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN ISO 4126-3:2020 is the adopted Irish version of the European Document EN ISO 4126-3:2020, Safety devices for protection against excessive pressure - Part 3: Safety valves and bursting disc safety devices in combination (ISO 4126-3:2020)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 4126-3

September 2020

ICS 13.240

Supersedes EN ISO 4126-3:2006

English Version

Safety devices for protection against excessive pressure - Part 3: Safety valves and bursting disc safety devices in combination (ISO 4126-3:2020)

Dispositifs de sécurité pour protection contre les pressions excessives - Partie 3: Soupapes de sûreté et dispositifs de sûreté à disque de rupture en combinaison (ISO 4126-3:2020)

Sicherheitseinrichtungen gegen unzulässigen Überdruck - Teil 3: Sicherheitsventile und Berstscheibeneinrichtungen in Kombination (ISO 4126-3:2020)

This European Standard was approved by CEN on 11 July 2020.

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

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

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European foreword

This document (EN ISO 4126-3:2020) has been prepared by Technical Committee ISO/TC 185 "Safety devices for protection against excessive pressure" in collaboration with Technical Committee CEN/TC 69 “Industrial valves” 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of an identical text or by endorsement, at the latest by March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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

This document supersedes EN ISO 4126-3:2006.

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 the relationship with EU Directive(s) see informative Annex ZA, which is an 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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 4126-3:2020 has been approved by CEN as EN ISO 4126-3:2020 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2014/68/EU (PED) aimed to be covered

This European Standard has been prepared under a Commission's standardization request to provide one voluntary means of conforming to Essential Requirements of New Approach Directive 2014/68/EU, Pressure Equipment Directive (PED).

Once this document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this document given in Table ZA.1 confers, within the limits of the scope of this document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Annex I of the Directive 2014/68/EU

Essential Requirements of Directive 2014/68/EU	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
Clause 2.1	5, 7, 9 and 12	General design
Clause 2.11.1 and 2.11.2	5, 6, 7, 8, 9, 11 and 12	Safety accessories
Clause 3.4 a), 1st indent	6	Installation instructions

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this document should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this document.

INTERNATIONAL STANDARD

ISO 4126-3

Second edition
2020-09

Safety devices for protection against excessive pressure —

Part 3: Safety valves and bursting disc safety devices in combination

Dispositifs de sécurité pour protection contre les pressions excessives —

Partie 3: Soupapes de sûreté et dispositifs de sûreté à disque de rupture en combinaison

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 185, *Safety devices for protection against excessive pressure,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 69, *Industrial valves,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 4126-3:2006), which has been technically revised.

The main changes compared to the previous edition are as follows:

— Eliminated unnecessary references and definitions throughout the document.

— Clause 5: Inlet line and pressure drop requirements from prior 6.2 were moved to Clause 5 and a reference to ISO 4126-9 was also added.

— Clause 7: Deleted specific references to specific EN standards to refer to the applicable pressure vessel standard to reflect the global nature of this document.

— Clause 9: The restrictions for F_d values less than 0,97 were eliminated.

— Clause 12: Clarified the applicable minimum bursting pressure for which the F_d value can be used for sizes larger than those flow tested.

— Clause 14: Added a requirement for the supplier to provide a test certificate if the F_d being used is a certified combination discharge coefficient.

A list of all parts in the ISO 4126 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Bursting disc safety devices can be used upstream of safety valves in the following cases:

a) to protect the safety valve against corrosion, fouling or operating conditions which could affect the safety valve performance;

b) to prevent leakage;

c) to prevent total loss of contents from the protected equipment following the bursting of the bursting disc.

The term *combination* is used to describe the close-coupled (i.e. within 5 pipe diameters) assembly of a bursting disc safety device upstream of a safety valve or controlled safety pressure relief systems (CSPRS), as defined by this document. Requirements for other installation arrangements of bursting discs with safety valves or CSPRS are defined in ISO 4126-9.

Safety devices for protection against excessive pressure —

Part 3:
Safety valves and bursting disc safety devices in combination

1 Scope

This document specifies only the requirements for a product assembled from the in-series combination of safety valves or CSPRS (controlled safety pressure relief systems) according to ISO 4126-1, ISO 4126-4 and ISO 4126-5, and bursting disc safety devices, according to ISO 4126-2, installed upstream of the valve within five pipe diameters of the valve inlet. It specifies the design, application and marking requirements for such products, composed of the bursting disc safety device, a safety valve or CSPRS and, where applicable, a connecting pipe or spool piece. In addition, it gives a method for establishing the combination discharge factor used in sizing combinations.

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 4126-1:2013, *Safety devices for protection against excessive pressure — Part 1: Safety valves*

ISO 4126-2:2018, *Safety devices for protection against excessive pressure — Part 2: Bursting disc safety devices*

ISO 4126-4:2013, *Safety devices for protection against excessive pressure — Part 4: Pilot operated safety valves*

ISO 4126-5:2013, *Safety devices for protection against excessive pressure — Part 5: Controlled safety pressure relief systems (CSPRS)*

ISO 4126-6:2014, *Safety devices for protection against excessive pressure — Part 6: Application, selection and installation of bursting disc safety devices*

ISO 4126-9:2008, *Safety devices for protection against excessive pressure — Part 9: Application and installation of safety devices excluding stand-alone bursting disc safety devices*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/