BS EN ISO 4126-4:2013

BSI Standards Publication

Safety devices for protection against excessive pressure

Part 4: Pilot-operated safety valves

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National foreword

This British Standard is the UK implementation of EN ISO 4126-4:2013. It supersedes BS EN ISO 4126-4:2004 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PSE/18/6, Industrial valves, steam traps, actuators and safety devices against excessive pressure - Safety devices against excessive pressure.

A list of organizations represented on this committee 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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Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2013.

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English Version

Safety devices for protection against excessive pressure - Part 4: Pilot-operated safety valves (ISO 4126-4:2013)

Dispositifs de sécurité pour protection contre les pressions excessives - Partie 4: Soupapes de sûreté pilotées (ISO 4126-4:2013)

Sicherheitseinrichtungen gegen unzulässigen Überdruck - Teil 4: Pilotgesteuerte Sicherheitsventile (ISO 4126-4:2013)

This European Standard was approved by CEN on 28 December 2012.

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.

CEN members are the national standards bodies of 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

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Foreword

This document (EN ISO 4126-4:2013) 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 January 2014, and conflicting national standards shall be withdrawn at the latest by January 2014.

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 ISO 4126-4:2004.

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.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 4126-4:2013 has been approved by CEN as EN ISO 4126-4:2013 without any modification.

Annex ZA
(informative)

Relationship between this International Standard and the Essential Requirements of EU Directive 97/23/EC (PED)

By agreement between ISO and CEN, this CEN annex is included in the DIS and the FDIS but will not appear in the published ISO standard.

This International Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide one means of conforming to Essential Requirements of the New Approach Directive 97/23/EC (PED).

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 normative clauses of this standard given in Table ZA.1 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.

Table ZA.1 — Correspondence between this International Standard and Directive 97/23/EC (PED)

Sub-clauses of this International Standard	Essential Requirements of Directive 97/23/EC (PED)	
	Essential Requirements	Annex I of PED
5,6,7,8,9	Safety accessories	2.11.1
5.1.5	Safety of operation	2.3
5.1.6	Drain and venting	2.5
6.3	Proof test	3.2.2
10	Marking and labelling	3.3

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

Contents

Page

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 4126-4 was prepared by Technical Committee ISO/TC 185, *Safety devices for protection against excessive pressure*.

This second edition cancels and replaces the first edition (ISO 4126-4:2004), which has been technically revised. It also incorporates the Technical Corrigendum ISO 4126-4:2004/Cor 1:2007.

ISO 4126 consists of the following parts, under the general title *Safety devices for protection against excessive pressure*:

— *Part 1: Safety valves*

— *Part 2: Bursting disc safety devices*

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

— *Part 4: Pilot-operated safety valves*

— *Part 5: Controlled safety pressure relief systems (CSPRS)*

— *Part 6: Application, selection and installation of bursting disc safety devices*

— *Part 7: Common data*

— *Part 9: Application and installation of safety devices excluding stand-alone bursting disc safety devices*

— *Part 10: Sizing of safety valves for gas/liquid two-phase flow*

— *Part 11: Performance testing*[1)]

Part 7 contains data that is common to more than one of the parts of ISO 4126 to avoid unnecessary repetition.

1) Under development.

Safety devices for protection against excessive pressure —

Part 4:
Pilot operated safety valves

1 Scope

This part of ISO 4126 specifies general requirements for pilot operated safety valves, irrespective of the fluid for which they are designed. In all cases, the operation is carried out by the fluid in the system to be protected.

It is applicable to pilot operated safety valves having a valve flow diameter of 4 mm and above which are for use at set pressures of 0,1 bar gauge and above. No limitation is placed on temperature.

This is a product standard and it is not applicable to applications of pilot operated safety valves.

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 4126-7:2013, *Safety devices for protection against excessive pressure — Part 7: Common data*

3 Terms and definitions

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

3.1
pilot operated safety valve
self-actuated device comprising a main valve and an attached pilot

Note 1 to entry: The pilot responds to the pressure of the fluid without any other actuating energy than the fluid itself and controls the operation of the main valve. The main valve opens when the fluid pressure that keeps it closed is removed or reduced. The main valve re-closes when the pressure is re-applied.

Note 2 to entry: See Figure 1 for a list of main components.

3.2
main valve
parts of a pilot operated safety valve, through which the discharge capacity is achieved

3.3
flowing pilot
pilot which discharges the fluid throughout the relieving cycle of the pilot operated safety valve