



SLOVENSKI STANDARD

SIST EN ISO 14691:2009

01-februar-2009

Nadomešča:

SIST EN ISO 14691:2001

**Petrokemična industrija ter industrija za predelavo nafte in zemeljskega plina -
Prožne spojke za mehanski prenos energije - Uporaba za splošne namene (ISO
14691:2008)**

Petroleum, petrochemical and natural gas industries - Flexible couplings for mechanical
power transmission - General-purpose applications (ISO 14691:2008)

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Erdöl-, petrochemische und Erdgasindustrie - Flexible Kupplungen für mechanische
Kraftübertragung - Allgemeine Anwendungsfälle (ISO 14691:2008)

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Industries du pétrole, de la pétrochimie et du gaz naturel - Accouplements flexibles pour
transmission de puissance mécanique - Applications d'usage général (ISO 14691:2008)

Ta slovenski standard je istoveten z: EN ISO 14691:2008

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en

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Petroleum, petrochemical and natural gas industries - Flexible couplings for mechanical power transmission - General-purpose applications (ISO 14691:2008)

Industries du pétrole, de la pétrochimie et du gaz naturel -
Accouplements flexibles pour transmission de puissance
mécanique - Applications d'usage général (ISO
14691:2008)

Erdöl-, petrochemische und Erdgasindustrie - Flexible
Kupplungen für mechanische Kraftübertragung -
Allgemeine Anwendungsfälle (ISO 14691:2008)

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Foreword

This document (EN ISO 14691:2008) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum and natural gas industries" in collaboration with Technical Committee CEN/TC 12 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries", 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of an identical text or by endorsement, at the latest by June 2009, and conflicting national standards shall be withdrawn at the latest by June 2009.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.

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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.

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INTERNATIONAL
STANDARD

ISO
14691

Second edition
2008-12-01

**Petroleum, petrochemical and natural gas
industries — Flexible couplings for
mechanical power transmission —
General-purpose applications**

*Industries du pétrole, de la pétrochimie et du gaz naturel —
Accouplements flexibles pour transmission de puissance mécanique —
Applications d'usage général*

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

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 14691 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

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This second edition cancels and replaces the first edition (ISO 14691:1999), which has been technically revised.

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Introduction

Users of this International Standard should be aware that further or differing requirements may be needed for individual applications. This International Standard is not intended to inhibit a vendor from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This may be particularly appropriate where there is innovative or developing technology. Where an alternative is offered, the vendor should identify any variations from this International Standard and provide details.

For the following applications, the use of ISO 10441 is recommended:

- large or high-speed machines that may be required to operate continuously for extended periods, are often unspared and are critical to the continued operation of the installation (special-purpose applications);
- machines in which the first lateral critical speed is less than the maximum required operating speed (flexible-shaft machines);
- machines in which the rotor dynamics are particularly sensitive to coupling unbalance.

This International Standard requires the purchaser to specify certain details and features. A bullet (●) at the beginning of a subclause or paragraph indicates that either a decision is required or that further information is to be provided by the purchaser. This information should be indicated on the datasheet(s), typical examples of which are included as Annex E, otherwise it should be stated in the quotation request or in the order.

The coupling vendor is not normally required to supply the coupling guard or guards. However, for completeness and for the information of the user of this International Standard, Annex D, which provides requirements for guards, has been added.

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Petroleum, petrochemical and natural gas industries — Flexible couplings for mechanical power transmission — General-purpose applications

1 Scope

This International Standard specifies the requirements for couplings for the transmission of power between the rotating shafts of two machines for general-purpose applications in the petroleum, petrochemical and natural gas industries. Such applications typically require couplings to transmit power at speeds not exceeding 4 000 r/min, between machines in which the first lateral critical speed is above the running speed range (stiff-shaft machines). It can, by agreement, be used for applications outside these limits.

NOTE 1 Recommendations are included in the Introduction as to when the use of ISO 10441 should be considered.

This International Standard is applicable to couplings designed to accommodate parallel (or lateral) offset, angular misalignment and axial displacement of the shafts without imposing excessive mechanical loading on the coupled machines. Couplings covered by this International Standard include gear (and other mechanical contact types), metallic flexible-element and various elastomeric types. Such couplings can be of all metal construction or can include components of non-metallic materials, such as composites.

This International Standard covers design, materials of construction, inspection and testing of couplings and methods of attachment of the coupling to the shafts (including tapered sleeve and other proprietary devices).

This International Standard does not apply to special types of couplings, such as clutch, hydraulic, eddy-current, rigid and radial-spline types.

This International Standard does not define criteria for the selection of coupling types for specific applications.

NOTE 2 In many cases, couplings covered by this International Standard are manufacturers' catalogue items.

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 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*

ISO 1940-1:2003, *Mechanical vibration — Balance quality requirements for rotors in a constant (rigid) state — Part 1: Specification and verification of balance tolerances*

ISO 8821, *Mechanical vibration — Balancing — Shaft and fitment key convention*

ANSI/AGMA 9002, *Bores and Keyways for Flexible Couplings (Inch Series)*

ANSI/AGMA 9003, *Flexible Couplings — Keyless Fits*

ANSI/AGMA 9112, *Bores and Keyways for Flexible Couplings (Metric Series)*