



SLOVENSKI STANDARD SIST EN 16397-1:2015

01-februar-2015

Prožne spojke - 1. del: Zahtevane lastnosti

Flexible couplings - Part 1: Performance requirements

Flexible Kupplungen - Teil 1: Leistungsanforderungen

Raccords flexibles - Partie 1: Exigences de performance

Ta slovenski standard je istoveten z: **EN 16397-1:2014**

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ICS:

23.040.60 Prirobnice, oglavki in spojni elementi Flanges, couplings and joints

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EUROPEAN STANDARD
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EN 16397-1

November 2014

ICS 23.040.60

English Version

Flexible couplings - Part 1: Performance requirements

Raccords flexibles - Partie 1: Exigences de performance

Flexible Kupplungen - Teil 1: Leistungsanforderungen

This European Standard was approved by CEN on 30 August 2014.

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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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Foreword

This document (EN 16397-1:2014) has been prepared by Technical Committee CEN/TC 165 "Waste water engineering", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2015 and conflicting national standards shall be withdrawn at the latest by August 2016.

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.

EN 16397 "*Flexible couplings*" contains the following parts:

- Part 1: Performance requirements;
- Part 2: Characteristics and testing for metal banded flexible couplings, adaptors and bushes.

This European Standard takes into account the requirements of EN 476.

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.

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EN 16397-1:2014 (E)**1 Scope**

This European Standard specifies the performance requirements for flexible couplings and adaptors and bushes for use with pipes and fittings in drain and sewer systems, usually operated under gravity and periodic hydraulic surcharge, both above and below ground inside or outside buildings and intended to connect pipes for:

- repair of damaged pipelines;
- connecting pipes of different materials and/or diameters;
- jointing short/cut lengths of pipe;
- jointing specific pipe systems;
- jointing post-inserted preformed junctions.

Typically a coupling consists of a moulded or extruded flexible sleeve with two clamping bands with or without a shear band. The clamping bands enable the sleeve to form a seal with the pipes to be jointed. The shear band gives resistance to shear forces. Connections may be made between pipes which cannot be satisfactorily jointed by a coupling alone, of dissimilar sizes or material, by using an appropriate bush or bushes with the coupling or by using an appropriate adaptor.

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.

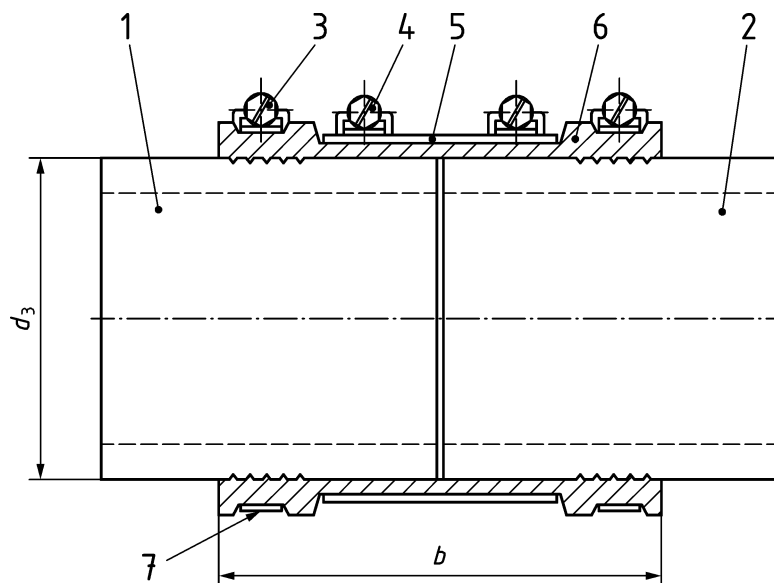
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- EN 476:2011, *General requirements for components used in drains and sewers*
- EN 1055:1996, *Plastics piping systems - Thermoplastics piping systems for soil and waste discharge inside buildings - Test method for resistance to elevated temperature cycling*
- EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*
- EN 16397-2, *Flexible couplings – Part 2: Characteristics and testing for metal banded flexible couplings, adaptors and bushes*

3 Terms and definitions

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

- 3.1**
flexible coupling
moulded or extruded and jointed flexible sleeve, with or without bushes or shear band, with adjustable clamping bands by which it is secured to the ends of pipes with outside diameters within the tolerance range covered by the coupling

Note 1 to entry: Examples are shown in Figures 1 to 3.

**Key**

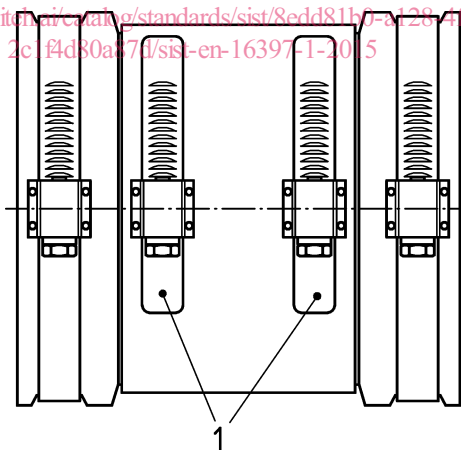
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|---|---------------|-------|------------------|
| 1 | pipe 1 | 6 | sleeve |
| 2 | pipe 2 | 7 | clamping band |
| 3 | drive unit | b | width of sleeve |
| 4 | adjustor unit | d_3 | outside diameter |
| 5 | shear band | | |

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Figure 1 — Example of a flexible coupling with shear band

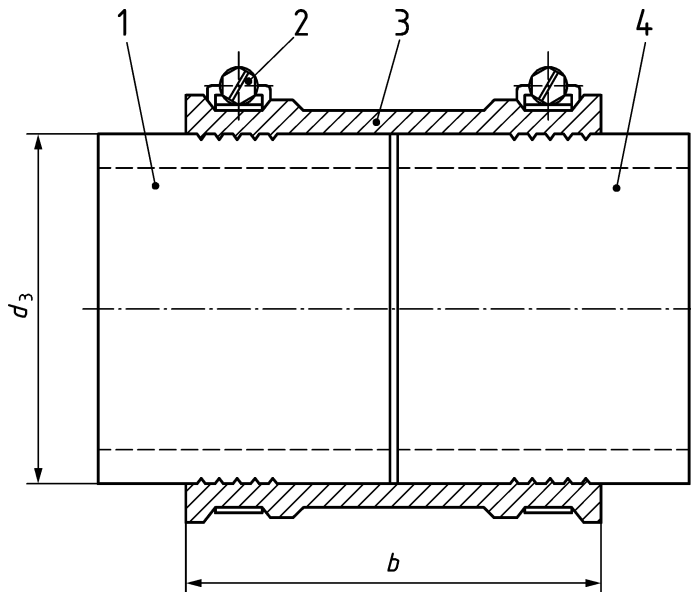
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**Key**

- | | |
|---|----------------------|
| 1 | shear band adjustors |
|---|----------------------|

Figure 2 — Example of elevation showing shear band adjustors

**Key**

| | | | |
|---|-------------------------------|-------|------------------|
| 1 | pipe 1 | b | width of sleeve |
| 2 | clamping band with drive unit | d_3 | outside diameter |
| 3 | sleeve | | |
| 4 | pipe 2 | | |

NOTE More than one drive unit could be used where required.

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Figure 3 — Example of flexible coupling without shear band

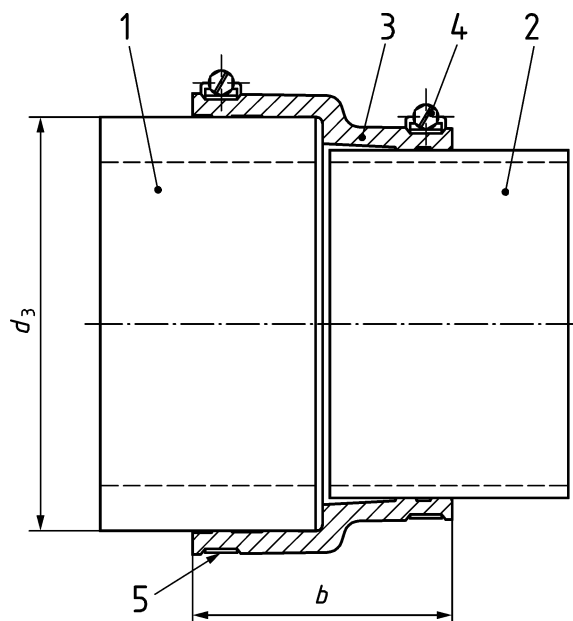
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3.2**flexible adaptor**

moulded or extruded stepped flexible sleeve with adjustable clamping bands by which it is secured to pipes of different outside diameters beyond the tolerance range for a flexible coupling which may incorporate an abrupt change of section

Note 1 to entry: An example of a metal banded adaptor is shown in Figure 4.

**Key**

| | | | |
|---|----------------|-------|------------------|
| 1 | pipe 1 | 5 | clamping band |
| 2 | pipe 2 | b | width of sleeve |
| 3 | moulded rubber | d_3 | outside diameter |
| 4 | drive unit | | |

NOTE More than one drive unit could be used where required.

Figure 4 — Example of metal banded adaptor

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3.3**bush**

moulded or extruded and joined elastomeric section only used with couplings having shear bands to compensate for variations between the outside diameters of pipes which cannot be satisfactorily joined by a coupling alone

3.4**nominal size of a flexible coupling and an adaptor**

maximum outside diameter of the pipes with which a flexible coupling or adaptor can be used

3.5**shear band**

component for bearing of shear loads after installation

3.6**clamping band**

means of clamping the flexible coupling to a pipe using a specified force

3.7**adjustor strip****shear band fixing**

means of clamping the shear band to the flexible coupling using a specified force

Note 1 to entry: See Figure 2.

3.8**stopper**

mechanical means of sealing the open end of a pipe, typically used in a pressure test