



SLOVENSKI STANDARD SIST EN 13232-1:2023

01-december-2023

Železniške naprave - Zgornji ustroj proge - Kretnice in križišča za Vignolove tirnice - 1. del: Definicije

Railway applications - Track - Switches and crossings for Vignole rails - Part 1:
Definitions

Bahnanwendungen - Oberbau - Weichen und Kreuzungen für Vignolschienen - Teil 1:
Definitionen

Applications ferroviaires - Voie - Appareils de voie - Partie 1: Définitions

Ta slovenski standard je istoveten z: **EN 13232-1:2023**

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ICS:

01.040.45	Železniška tehnika (Slovarji)	Railway engineering (Vocabularies)
45.080	Tračnice in železniški deli	Rails and railway components

SIST EN 13232-1:2023

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13232-1

October 2023

ICS 01.040.93; 93.100

Supersedes EN 13232-1:2003

English Version

**Railway applications - Track - Switches and crossings for
Vignole rails - Part 1: Definitions**

Applications ferroviaires - Voie - Appareils de voie
pour rails Vignole - Partie 1 : Définitions

Bahnanwendungen - Oberbau - Weichen und
Kreuzungen für Vignolschienen - Teil 1: Definitionen

This European Standard was approved by CEN on 2 January 2023.

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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
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 13232-1:2023) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, 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of an identical text or by endorsement, at the latest by April 2024, and conflicting national standards shall be withdrawn at the latest by April 2024.

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 13232-1:2003.

This series of standards “*Railway applications – Track – Switches and crossings for Vignole rails*” covers the design and quality of switches and crossings in flat bottomed rail. The list of Parts is as follows:

- *Part 1: Definitions*
- *Part 2: Requirements for geometric design*
- *Part 3: Requirements for wheel/rail interaction*
- *Part 4: Actuation, locking and detection*
- *Part 5: Switches*
- *Part 6: Fixed common and obtuse crossings*
- *Part 7: Crossings with moveable parts*
- *Part 8: Expansion devices*

— *Part 9: Layouts*

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Part 1 contains terminology used throughout all parts of this series. Parts 2 to 4 contain basic design guides and are applicable to all switch and crossing assemblies. Parts 5 to 8 deal with particular types of equipment including their tolerances. These use Parts 1 to 4 as a basis. Part 9 defines the functional and geometric dimensions and tolerances for layout assembly.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Türkiye and the United Kingdom.

EN 13232-1:2023 (E)**1 Scope**

This document provides an accepted terminology for switch and crossing work. With the assistance of diagrams, the various components are given definitions, and these specific names are regarded as obligatory.

The terms and definitions cover the constituent parts and design geometry of switch and crossing work. Additional terminology of a more specific nature will be defined in the relevant part of the series.

The present definitions set out the terms most generally used for the geometrical form and the construction of switches and crossings.

This document applies to railways running on Vignole rails.

2 Normative references

There are no normative references in this document.

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/>

3.1 General definitions**3.1.1****customer**

operator or user of the equipment

Note 1 to entry: This can sometimes be the purchaser of the equipment on the user's behalf.

3.1.2**supplier**

body responsible for the use of this EN in response to the customer's requirements

3.1.3**contact area**

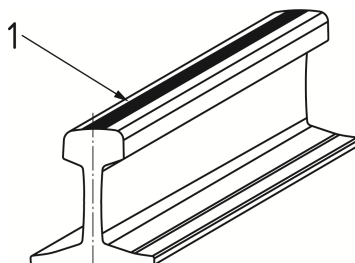
those parts of the rail ensuring the support and/or guidance, inside or outside, of a wheel

Note 1 to entry: see Figure 4.

3.1.4**running table**

upper surface of the head of a rail

Note 1 to entry: see Figures 1 and 4

**Key**

1 running table

Figure 1

3.1.5**running surface**

curved surface defined by the longitudinal displacement of a straight line perpendicular to the centre-line of the track and tangential to both running tables

Note 1 to entry: see Figure 2

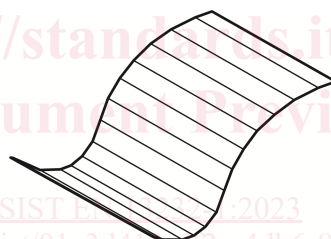


Figure 2

3.1.6**running plane**

flat plane tangential to the running surface at the considered point

Note 1 to entry: see Figure 4

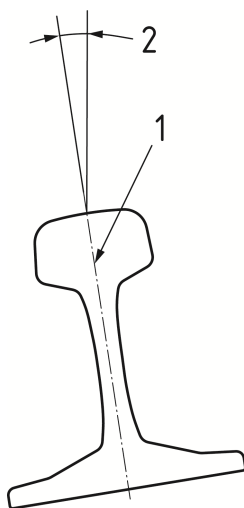
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EN 13232-1:2023 (E)**3.1.7****rail inclination**

angle measured as a tangent (e.g. 1 in 20) between the normal to the running surface and the y-y axis of the rail

Note 1 to entry: see Figure 3.

Note 2 to entry: Rail head inclination may be achieved by inclining the rail as shown in Figure 3 or by inclining the head profile only, for example by machining.

**Key**

- 1 y-y-axis
- 2 rail inclination

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Figure 3**3.1.8****inclined track**

where the axes of the two running rails are inclined towards each other

Note 1 to entry: see Figure 4.

3.1.9**vertical track**

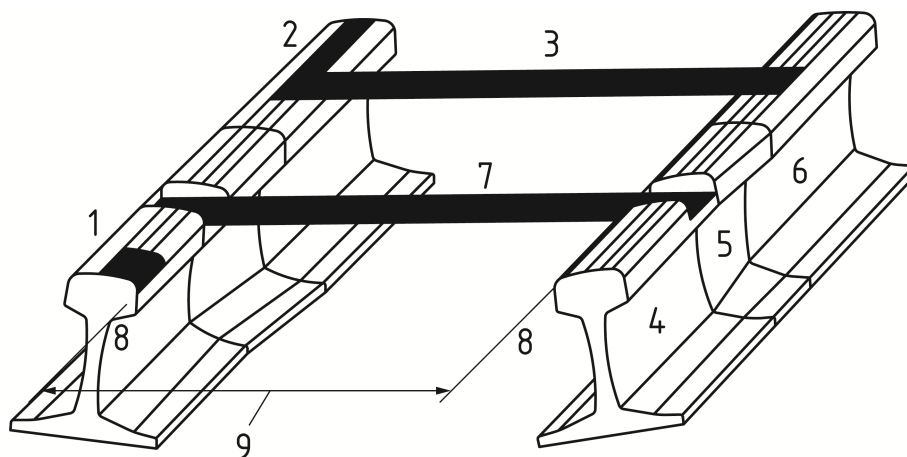
where the axes of the two running rails are parallel, that is, have a rail inclination of zero

Note 1 to entry: see Figure 4.

3.1.10**rail twist**

change in inclination of the rail (e.g. from 1 in 20 to vertical)

Note 1 to entry: see Figure 4.

**Key**

- | | |
|-----------------|-------------------------|
| 1 contact area | 6 vertical rail |
| 2 running table | 7 gauge reference plane |
| 3 running plane | 8 running edge |
| 4 inclined rail | 9 design track gauge |
| 5 rail twist | |

Figure 4

3.1.11**gauge reference plane**

plane parallel to and below the running surface at a dimension "z". This plane is used for all design work, machining, and measurements

Note 1 to entry: see Figures 4 and 5.

Note 2 to entry: This dimension "z" is generally 14 mm.

**Key**

- z depth of gauge reference plane below running table

Figure 5

EN 13232-1:2023 (E)**3.1.12****running edge**

intersection of the gauge reference plane with the inside of the rail head

Note 1 to entry: see Figure 4

3.1.13**design track gauge**

nominal distance between the corresponding running edges of the two rails

Note 1 to entry: see Figure 4

3.1.14**centre-line of track**

line midway between the running edges on straight track, and half design track gauge inside the running edge of the larger radius rail in curved track

Note 1 to entry: see Figures 4 and 6

3.1.15**high-side rail**

on curved track, the rail with the larger radius, i.e. centre-line radius plus half of design track gauge

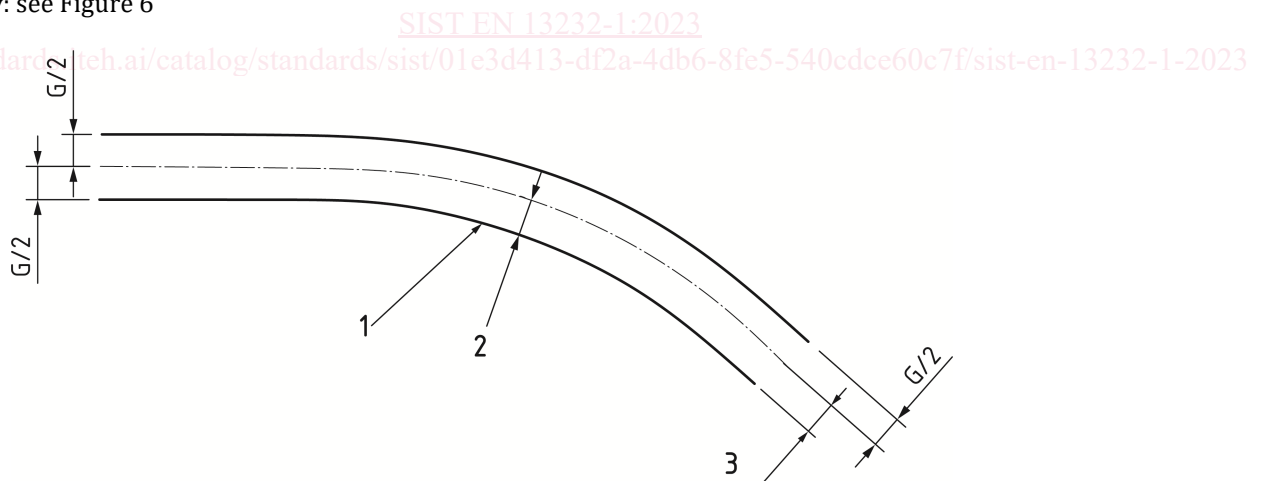
3.1.16**low-side rail**

on curved track, the rail with the smaller radius

3.1.17**gauge widening**

intended increase in design track gauge. The radius of the low-side rail is decreased, and the distance between the centre-line of track and the low-side rail is increased, by the amount of gauge widening

Note 1 to entry: see Figure 6

**Key**

- 1 gauge widening on sharp curves
- 2 $A +$ gauge widening
- 3 $A +$ gauge widening
- G design track gauge

Figure 6