



SLOVENSKI STANDARD
SIST EN 15624:2021/oprA1:2023

01-marec-2023

Železniške naprave - Zavore - Avtomatsko menjalo "naloženo-prazno" - Dopolnilo A1

Railway applications - Braking - Empty-loaded changeover devices

Bahnanwendungen - Bremse - Leer-Beladen-Umstellvorrichtungen

Applications ferroviaires - Freinage - Dispositifs de changement de régime vide-chargé

Ta slovenski standard je istoveten z: EN 15624:2021/prA1

ICS:

45.040	Materiali in deli za železniško tehniko	Materials and components for railway engineering
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SIST EN 15624:2021/oprA1:2023

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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EN 15624:2021
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January 2023

ICS

English Version

Railway applications - Braking - Empty-loaded changeover devices

Applications ferroviaires - Freinage - Dispositifs de changement de régime vide-chargé

Bahnwendungen - Bremse - Leer-Beladen-Umstellvorrichtungen

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 256.

This draft amendment A1, if approved, will modify the European Standard EN 15624:2021. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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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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[SIST EN 15624:2021/oprA1:2023](https://standards.iteh.ai/catalog/standards/sist/f7043d70-0666-4ed5-8049-2b222dda640c/sist-en-15624-2021-opra1-2023)

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European foreword

This document (EN 15624:2021/prA1:2023) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

The main changes compared to EN 15624:2021 are:

- a) Scope has been modified: G/P changeover device has been included and other informative content has been moved to new Introduction;
- b) new 4.11 “Colours” has been added;
- b) the content of Annex B has been modified and changed to normative;
- c) new normative Annex C “G/P changeover device” has been added;
- d) Annex ZA has been updated.

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EN 15624:2021/prA1:2022 (E)**1 Creation of an Introduction**

Add an introduction as follows:

“The purpose of empty-loaded changeover devices is the generation of a load-related signal which causes the brake performance to be adjusted to the current vehicle mass.

The manually operated empty-loaded changeover devices change their output signal according to the position of the handles which together with the associated changeover plates serve as interfaces. The changeover plates read the required information for the operation of the empty-loaded changeover devices, i.e. brake weights for each position and the relevant changeover mass of the vehicle.

Automatic empty-loaded changeover devices sense a certain load threshold of the vehicle to automatically adjust the output signal when the mass of a vehicle reaches a defined value. This threshold is the changeover mass. Below this mass the vehicle’s brake system provides a reduced brake force. For the changeover mass or more the high brake force applies.

In addition, Annex C of this document contains information on the G/P changeover device, which was originally covered by EN 15877-1 but is about to be removed from that document. It is intended to develop a new standard for brake position change over devices, which will adopt these requirements.”

2 Modification to the Scope

Change the scope from

“This document is applicable to empty-loaded changeover devices. The purpose of such devices is the generation of a load-related signal which causes the brake performance to be adjusted to the current vehicle mass.

The manually operated empty-loaded changeover devices change their output signal according to the position of the handles which together with the associated changeover plates serve as interfaces. The changeover plates read the required information for the operation of the empty-loaded changeover devices, i.e. brake weights for each position and the relevant changeover mass of the vehicle.

Automatic empty-loaded changeover devices sense a certain load threshold of the vehicle to automatically adjust the output signal when the mass of a vehicle reaches a defined value. This threshold is the changeover mass. Below this mass the vehicle’s brake system provides a reduced brake force. For the changeover mass or more the high brake force applies.

This document specifies the requirements for the design, testing and quality assurance of empty-loaded changeover devices.”

to

“This document specifies the requirements for the design, testing and quality assurance of empty-loaded changeover devices.

This document is applicable to empty-loaded changeover devices.

This document specifies the shape and measures of the G/P changeover device’s plate and handle.”

3 Modification to order of subclauses in Clause 4, “Design and manufacture”

Move the subclause

“4.8. Compressed air quality”

below Table 1, becoming

“4.5 Compressed air quality”.

4 Creation of a new subclause 4.11, “Colours”

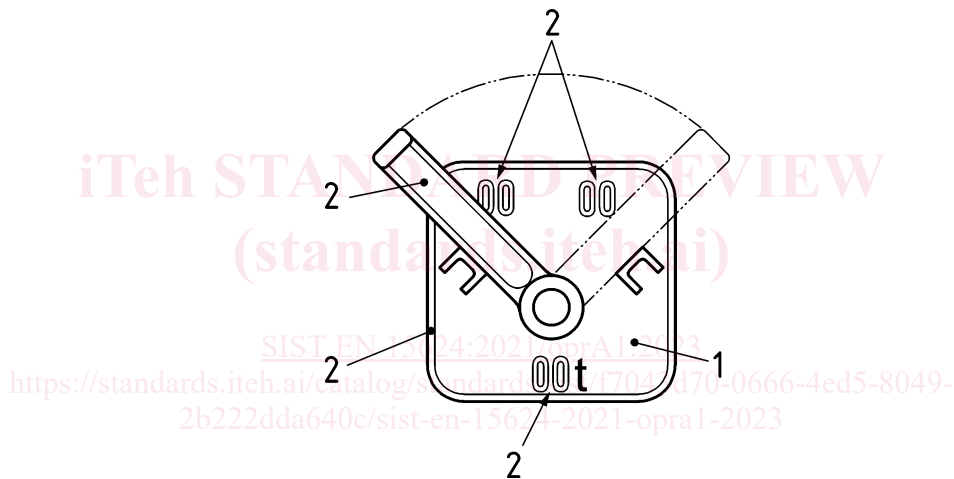
Add a new subclause 4.11, “Colours” with the following content.

“The empty-loaded changeover devices of new vehicles shall have the following colours:

- white background of the changeover plate;
- red frame covering the edges of the changeover plate;
- braked weights, the changeover mass and their symbols or describing texts, limit stops and handle in red.

Deliberately there is no reference to the RAL colour chart to define the colour exactly. Any white or red may be used.

The empty-loaded changeover plate should contrast from its background and surroundings. This is best with direct surroundings and background other than white or red. If the vehicle is in these colours a darker contrasting frame may be useful.



Key

- 1 white
- 2 red

Figure 1 — Colours of the empty-loaded changeover device”

5 Modification to Clause 6, “In-service assessment”

Change the second sentence from

“Annex D contains actual requirements of an “in service trial” to assess an empty-loaded changeover device when fitted in a system.”

to

“Annex E contains actual requirements of an “in service trial” to assess an empty-loaded changeover device when fitted in a system.”

EN 15624:2021/prA1:2022 (E)

6 Modifications to 8.2, “Changeover plate for the manual empty-loaded changeover device”

Change the first sentence from

“The manual empty-loaded changeover plate shall be in accordance with EN 15877-1:2012+A1:2018 (4.5.30.2.3).”

to

“The manual empty-loaded changeover plate inscriptions shall be in accordance with EN 15877-1:2012+A1:2018, 4.5.30.2.3.”

7 Modifications to Annex B

Replace the current Annex B with the following:

Annex B (normative)

Manual empty-loaded changeover device handles and changeover plates

Figure B.1 shows the principle shape of a changeover plate and of handles for empty-loaded changeover device in front view and side view.

Figure B.2 shows the changeover plate of the empty-loaded changeover device with symbols. The symbol version shall be used for new vehicles. The shape and measures of the handle shall be in accordance with Figure B.3.

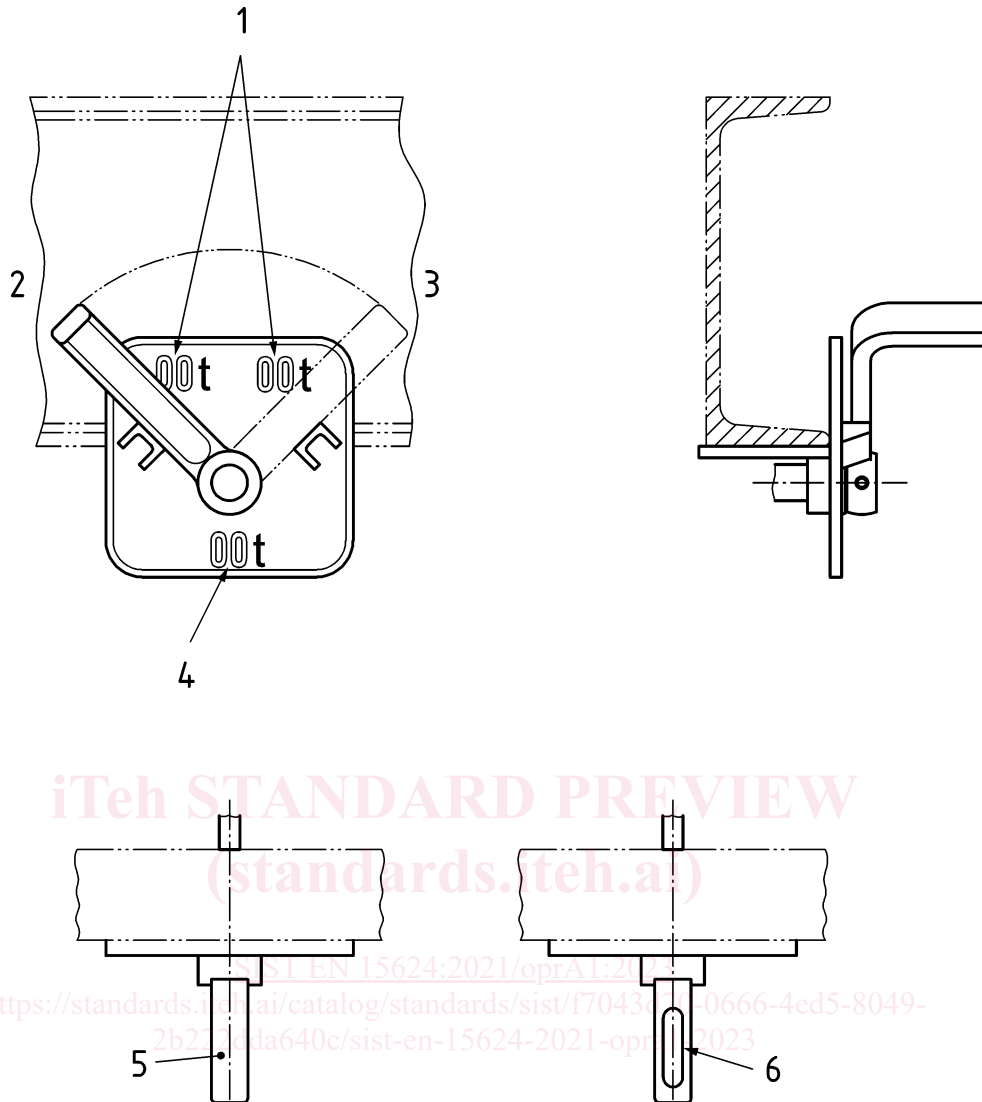
The braked weights (t) are marked next to the corresponding position of the handle. The changeover mass is indicated on the same changeover plate near the point of rotation of the lever.

Figure B.5 shows the principle shape of a changeover plate and of handles for empty-loaded changeover device in front view, if the wagon has two different “loaded” positions.

The changeover plates of this device with symbols shall be in accordance with Figure B.6.

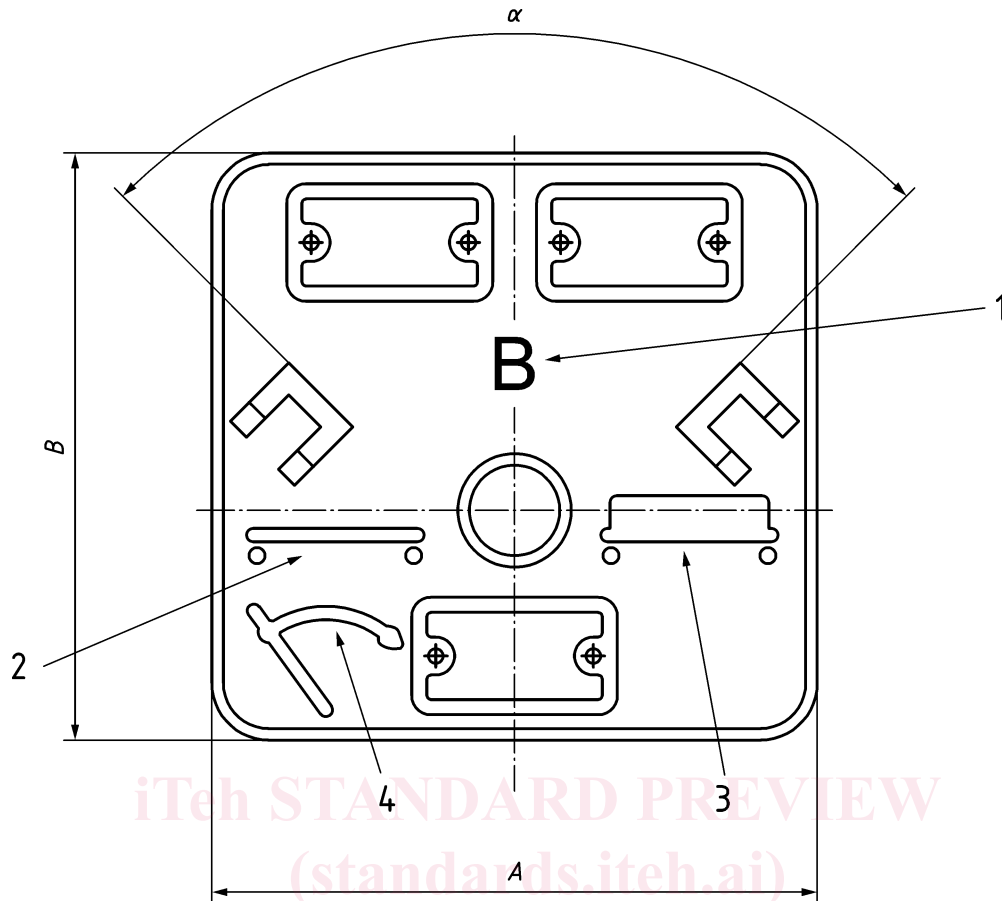
The braked weights (t) are marked next to the corresponding position of the handle. The changeover masses are indicated on the same plate near the point of rotation of the lever.

If the wagon has two or more separate “empty/loaded” devices, the levers are fitted with a handle with an oblong hole as shown in principle in Figure B.1, position 6, and in detail in Figure B.4.

**Key**

- 1 braked weights, in t. Unit letter "t" is recommended only and not mandatory.
- 2 handle in empty position
- 3 handle in loaded position
- 4 changeover mass, in t. Unit letter "t" is recommended only and not mandatory.
- 5 solid handle, if there is one empty-loaded changeover device per vehicle
- 6 oblong hole, signals that the wagon is fitted with more than one empty changeover device

Figure B.1 — Manual empty-loaded changeover device principle

**Key**

A measure A = (175 ± 10) mm

B measure B = $(175 +10/-15)$ mm

α operation angle = $90^\circ \pm 10^\circ$

1 symbol for braked weight

2 symbol for empty vehicle

3 symbol for loaded vehicle

4 symbol for changeover mass

Figure B.2 — Changeover plate of empty-loaded changeover device with symbols