



# SLOVENSKI STANDARD

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**Oprema za vzdrževalna dela zimske službe in službe za vzdrževanje cest - Oprema za namestitvev na sprednji del vozila - 1. del: Nepremična odrivna plošča**

Winter and road service area maintenance equipments - Front-mounted equipments - Part 1: Fixed front mounting plates

**iTeh STANDARD PREVIEW**

Winterdienst- und Straßenbetriebsdienstausstattung - Mechanische Schnittstelle an Fahrzeugen für frontangebaute Maschinen - Teil 1: Feste Frontanbauplatten

[SIST EN 15432-1:2011](http://standards.itih.si/catalog/standards/sist/cd914802-934d-4e3a-bbc8-89a882bec4e2/sist-en-15432-1-2011)

Matériels de viabilité hivernale et d'entretien des dépendances routières - Équipement frontal - Partie 1: Plaques de base avant fixes

**Ta slovenski standard je istoveten z: EN 15432-1:2011**

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**ICS:**

43.160      Vozila za posebne namene      Special purpose vehicles

**SIST EN 15432-1:2011**

**en,fr,de**

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EUROPEAN STANDARD

**EN 15432-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2011

ICS 43.160

Supersedes EN 15432:2008

English Version

## Winter and road service area maintenance equipments - Front-mounted equipments - Part 1: Fixed front mounting plates

Matériels de viabilité hivernale et d'entretien des dépendances routières - Équipement frontal - Partie 1: Plaques de base avant fixes

Winterdienst- und Straßenbetriebsdienstausstattung - Frontanbauausstattungen - Teil 1: Feste Frontanbauplatten

This European Standard was approved by CEN on 3 June 2011.

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
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## Foreword

This document (EN 15432-1:2011) has been prepared by Technical Committee CEN/TC 337 “Winter maintenance and road service area maintenance equipment”, 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 2012 and conflicting national standards shall be withdrawn at the latest by January 2012.

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 together with EN 15432-2 supersedes EN 15432:2008.

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, 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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**EN 15432-1:2011 (E)****1 Scope**

This European Standard specifies the requirements for the various elements of carrying vehicles to ensure interchangeability between a vehicle and different equipments that are to be mounted frontally. It specifies certain interchangeability dimensions of the front mounting plate, including its height above the ground, as well as the locations of coupling devices for electrical and hydraulic connections and for mechanical power take off (PTO).

This European Standard specifies three different classes of mounting plates in order to cover road vehicles, independently from vehicle category and maximum permissible load, of the greatest possible variety (commercial vehicles, multi-purpose vehicles, communal vehicles,...) which are capable of carrying front-mounted equipments for winter maintenance and for road service area maintenance.

This European Standard specifies, with regard to electrical and hydraulic connections and to PTO, only location areas, clearance spaces and preferred layout in order to ensure interchangeability. Requirements applying to connectors, coupling devices and PTO splines are given in EN 15431.

Normative Annex A specifies provisions for an advanced front coupling system that is able to allow for mounting and demounting equipments without the use of tools. Users having to address specific needs (e.g. extreme weather conditions) may require the vehicle be fitted with such automatic coupling system.

Normative Annex B gives provisions for a compact and light front mounting plate intended for combined road and off-road applications.

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**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. [SIST dated reference: https://standards.iteh.ai/catalog/standards/sist/cd914802-934d-4e3a-bbc8-89a882bec4e2/sist-en-15432-1-2011](https://standards.iteh.ai/catalog/standards/sist/cd914802-934d-4e3a-bbc8-89a882bec4e2/sist-en-15432-1-2011)

EN 15431, *Winter and road service area maintenance equipments — Power system and related controls — Interchangeability and performance requirements*

ISO 1176:1990, *Road vehicles — Masses — Vocabulary and codes*.

**3 Interchangeability requirements****3.1 Front mounting plate****3.1.1 General provisions**

Mounting plates of all classes, as defined in following 3.1.2, shall be designed and installed to the carrying vehicle so as to allow for the easy and safe tilting of the cabin (if the vehicle has been designed to provide for this facility).

Mounting plates of all classes, as defined in following 3.1.2, shall be designed and installed to the carrying vehicle so as to allow for the mounting of a front towing hitch (if the vehicle has been designed to provide for this facility). Compliance to this requirement may be achieved in different ways, e.g. by a pivoting or folding mounting plate, by an appropriate un-obstructing design or by provisions for direct mounting of the hitch to the mounting plate itself.

Characteristics of the quick-coupling system designed to allow for mounting and demounting of equipments without the use of tools are given in Annex A.

Characteristics of the compact mounting plate designed for combined road and off-road applications are given in Annex B.

### 3.1.2 Mounting plate classes

Table 1 gives indication on installation heights and on recommended range of the maximum design total mass (ISO 1176:1990, 4.7, ISO-M07) of the carrying vehicle for each of the three classes of mounting plates that are defined in this European Standard.

Installation height is measured with the carrying vehicle being at kerb mass (ISO 1176:1990, 4.6, ISO-M06) from the ground to the upper edge of the mounting plate, as shown in Figures 2, 3 and 4.

**Table 1 — Installation heights of mounting plate classes**

Mounting plate class	Height	Recommended range of carrying vehicle maximum design total mass <sup>a</sup>
	mm	
F 1	1000 ± 60	≥ 7,5
F 2	870 ± 50	≥ 3,5 and ≤ 9
F 3	650 ± 30	≤ 6

<sup>a</sup> When mounting plates of classes F1 to F3 are being mounted on vehicles which are not covered by ISO 1176, recommended ranges as given in the table may not be applicable.

### 3.1.3 Strength requirements (standards.iteh.ai)

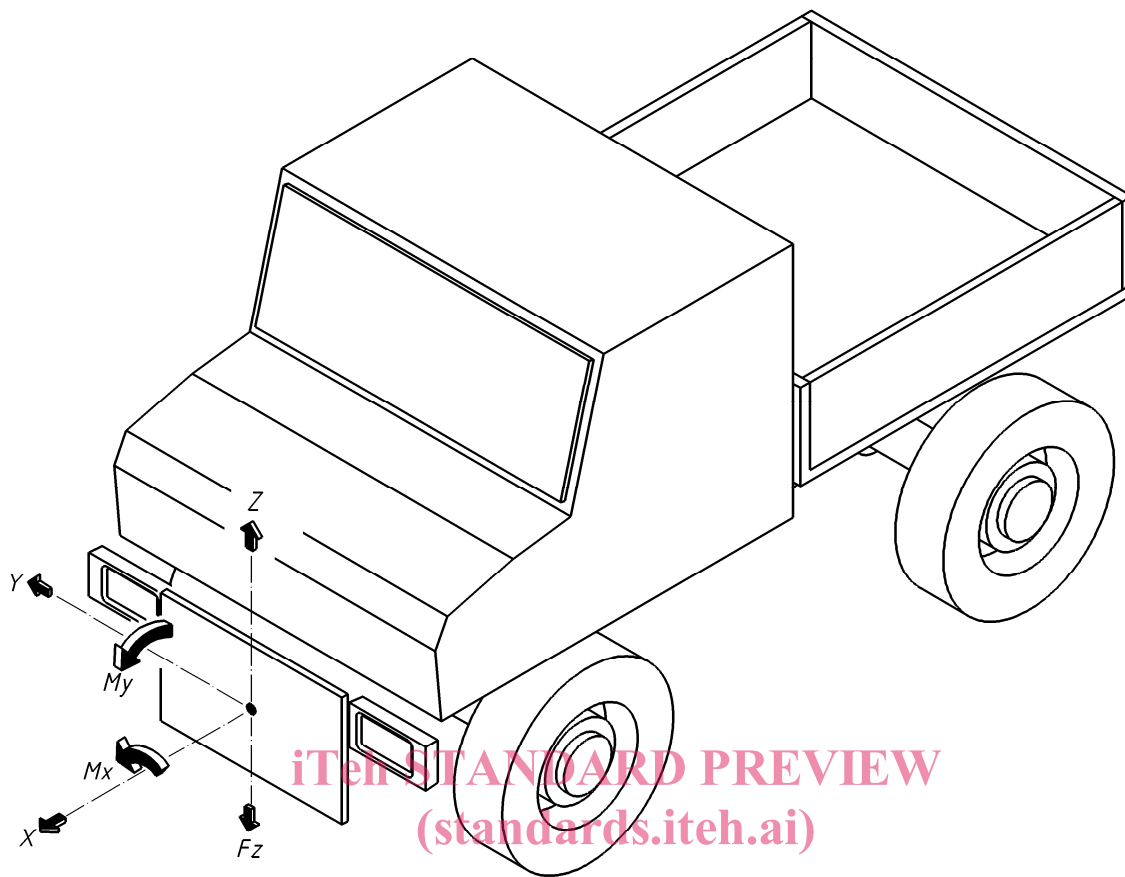
Mounting plates shall be designed so as to withstand to the maximum loads and moments that are given in Table 2 for each appropriate class. The values given in Table 2 refer to static loads and moments applied by the greatest variety of equipments (e.g. snow plough, grass cutting machine, ...) that may be fixed on the mounting plate. Equipments apply static loads and moments when they are being held in a raised position for transportation and transfer purposes.

**Table 2 — Maximum static loads**

Mounting plate class	Vertical load, Fz	Bending moment, My	Torsional moment, Mx
	kN	kNm	kNm
F 1	22	22	45
F 2	12	12	18
F 3	5	5	5

Loads and moments given in Table 2 refer to the vehicle coordinate system as shown in Figure 1.

Mounting plates shall also be able to withstand to foreseeable dynamic forces which may arise when working with equipments having maximum static loads shown in Table 2.



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**Figure 1 — Vehicle coordinate system**

### 3.1.4 Designation

Mounting plates meeting the requirements of this European Standard shall be identified by the following information, in the order given:

- a) reference to this European Standard;
- b) indication of the mounting plate class.

EXAMPLE Mounting plate of class F 2: Mounting plate EN 15432-1:2011 F 2.

### 3.1.5 Interchangeability dimensions

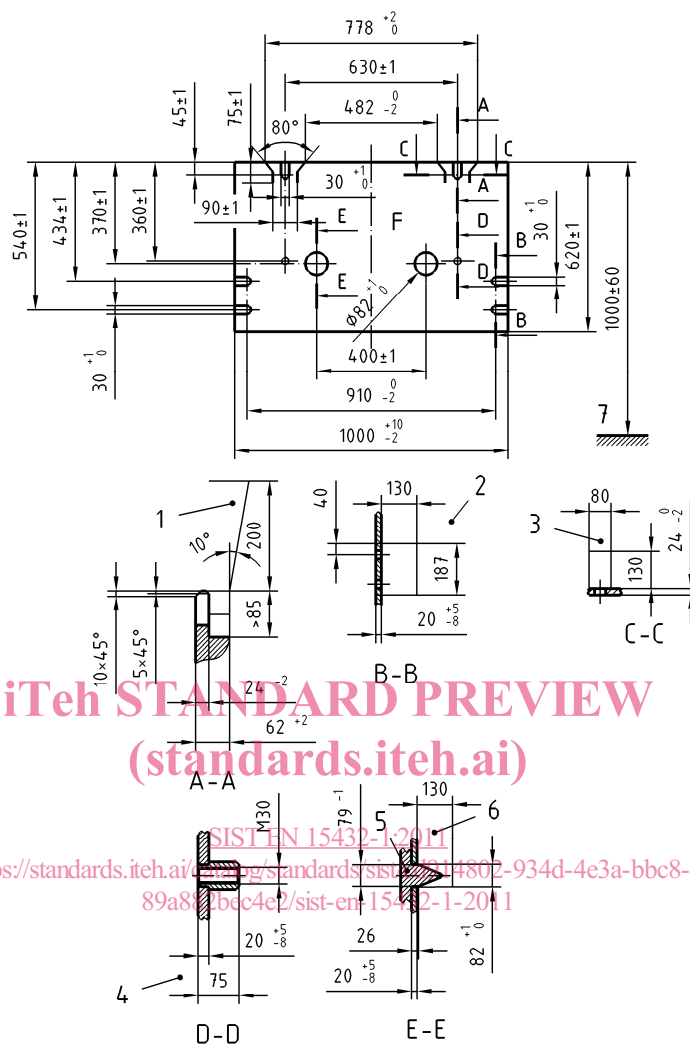
Interchangeability dimensions of mounting plates shall be according to:

- Figure 2 for Class F 1 mounting plates;
- Figure 3 for Class F 2 mounting plates;
- Figure 4 for Class F 3 mounting plates.

Dimensions not specified in Figures 2, 3 and 4 are left to the discretion of the manufacturer.



Dimensions in millimetres



Option: Additional elements, which do not conflict with the characteristic dimensions, may be provided to couple infuse implements, using different fixing systems.

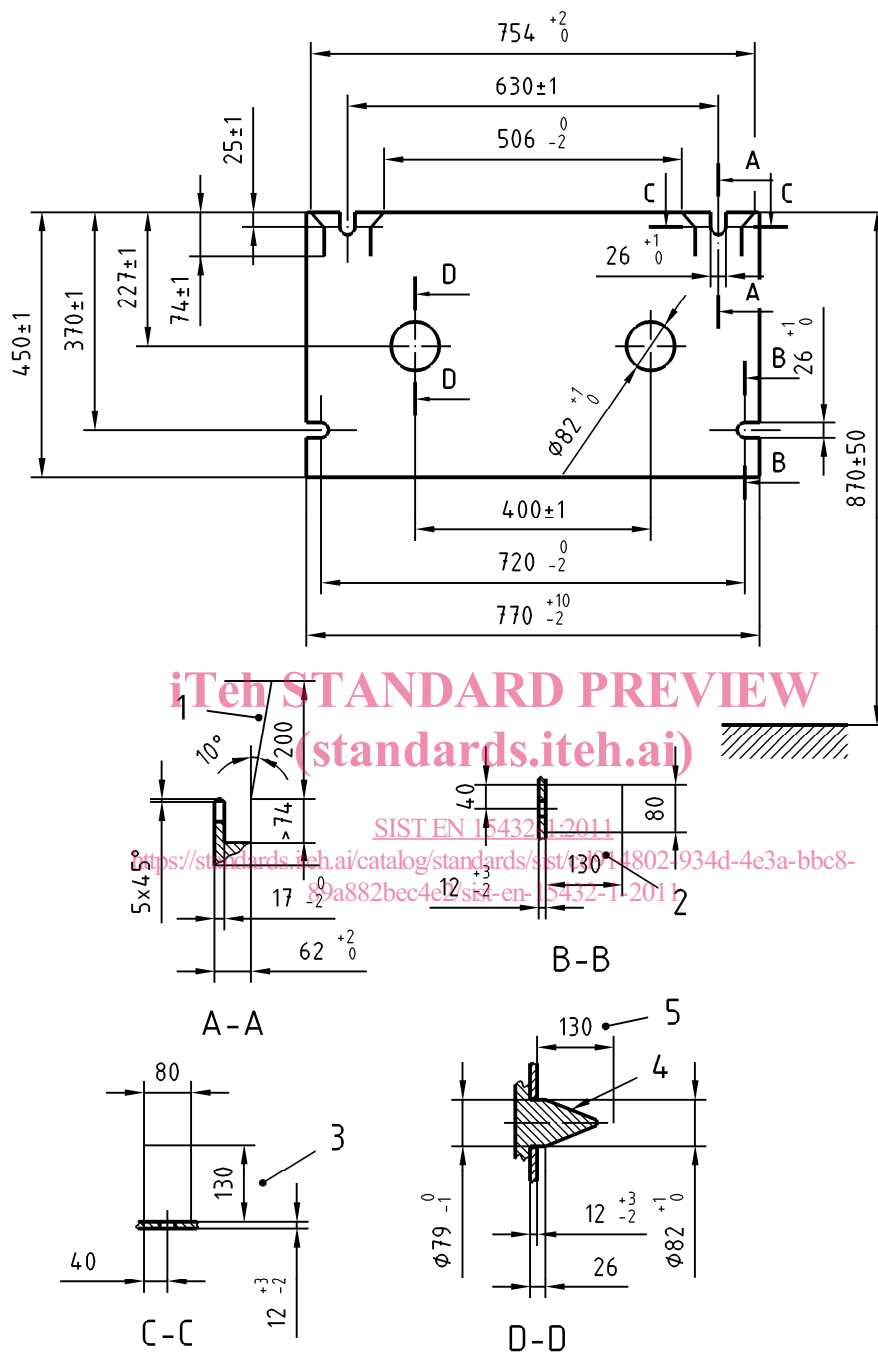
NOTE Additional cut-outs are allowed if the stiffness is not reduced thereby.

Figure 2 (continued)

### Key

- 1 Clearance for claws
- 2 Clearance for swivel bolt
- 3 Clearance for swivel bolt
- 4 Clearance 75
- 5 Cone
- 6 Clearance 130
- 7 Ground level

Figure 2 — Dimensions for F 1 mounting plates



NOTE Additional cut-outs are allowed if the stiffness is not reduced thereby.

Figure 3 — Dimensions for F 2 mounting plates

Dimensions in millimetres

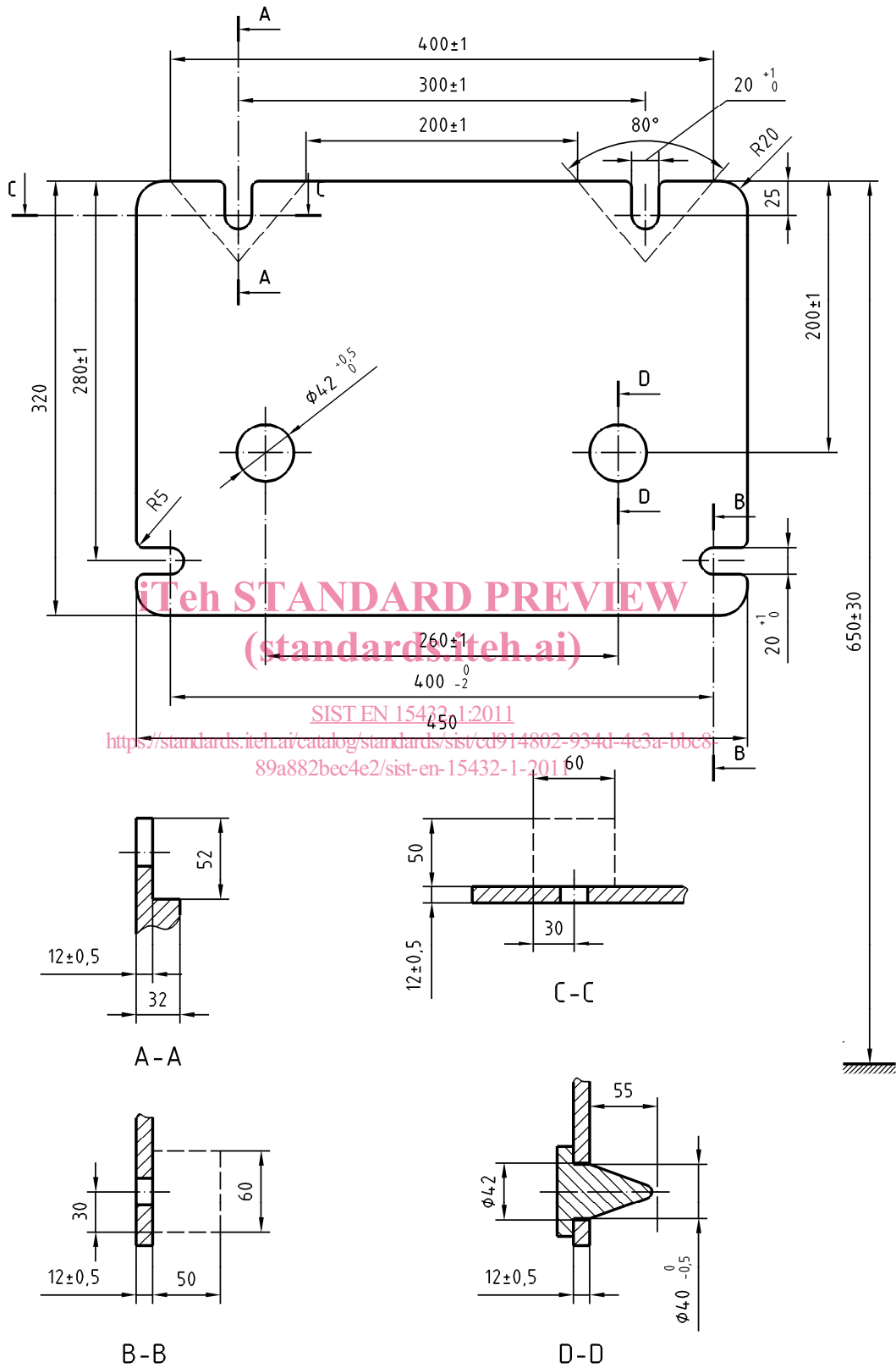


Figure 4 — Dimensions for F 3 mounting plates