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**Bivalna počitniška vozila - Avtodomi - 2. del: Obremenitev**

Leisure accommodation vehicles - Motor caravans - Part 2: User payload

Bewohnbare Freizeitfahrzeuge - Motorcaravans - Teil 2: Zuladung

Véhicules habitables de loisirs - Autocaravanes - Partie 2 : Charges utiles

**Ta slovenski standard je istoveten z: EN 1646-2:2008**

SIST EN 1646-2:2008

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**ICS:**

43.100	Osebni avtomobili. Bivalne prikolice in lahke prikolice	Passenger cars. Caravans and light trailers
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**SIST EN 1646-2:2008****en,fr,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 1646-2**

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ICS 43.100

Supersedes EN 1646-2:1998

English Version

**Leisure accommodation vehicles - Motor caravans - Part 2: User  
payload**

Véhicules habitables de loisirs - Autocaravanes - Partie 2 :  
Charges utiles

Bewohnbare Freizeitfahrzeuge - Motorcaravans - Teil 2:  
Zuladung

This European Standard was approved by CEN on 9 May 2008.

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 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 Management Centre has the same status as the official versions.

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## Foreword

This document (EN 1646-2:2008) has been prepared by Technical Committee CEN/TC 245 "Leisure accomodation vehicles", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by December 2008, and conflicting national standards shall be withdrawn at the latest by December 2008.

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 supersedes EN 1646-2:1998.

This document is one of a series covering the habitation and design aspects of leisure accommodation vehicles.

The method of calculation of user payloads to be allowed for when designing caravans is specified in EN 1645-2.

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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## EN 1646-2:2008 (E)

## 1 Scope

This European standard specifies the calculation method of user payloads allowed, when designing motor caravans.

It also sets out the information relating to user payload to be included in the user's handbook.

It applies to motor caravans as defined in EN 13878.

## 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.

EN 13878:2003, *Leisure accommodation vehicles — Terms and definitions*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13878:2003 and in Directive 92/21/EEC and the following apply.

### 3.1

#### **maximum technically permissible laden mass**

mass of the vehicle which takes into account operating conditions including factors such as the strength of materials, loading capacity of the tyres, etc., and which is stated by the vehicle manufacturer

### 3.2

#### **registration mass**

mass of the vehicle declared by the manufacturer at type approval for registration; this mass shall not exceed the mass according to 3.1, if the requirements specified in clause 5 of this standard are met

### 3.3

#### **mass of the vehicle in running order**

mass of the unladen vehicle with bodywork and, in the case of a towing vehicle with coupling device, in running order (including coolant, oils, 90 % fuel, tools, spare wheel (if any) and driver (75 kg)); it also includes the essential habitation equipment (see 3.6)

### 3.4

#### **mass of the conventional load**

mass allowance for passengers (see 5.2)

### 3.5

#### **user payload**

difference between the maximum technically permissible laden mass (see 3.1) or the registration mass (see 3.2) and the mass of the vehicle in running order (see 3.3)

### 3.6

#### **essential habitation equipment**

items and fluids required for the safe and proper functioning of the equipment for habitation as defined by the manufacturer of the motor caravan

**3.7****personal effect**

item which a user can choose to carry in a motor caravan and which is not included as essential habitation equipment or optional equipment

**3.8****optional equipment**

items made available by the manufacturer over and above the standard specification for the motor caravan

**4 Mass of the vehicle in running order****4.1 General**

The mass of any item shall not be included more than once.

**4.2 Essential habitation equipment**

The essential habitation equipment shall include the following items, as appropriate, in the state given:

**a) Installation of Liquid Petroleum Gas (LPG) system:**

- 1) mass of the recommended cylinder(s) or tank(s) when filled in accordance with Directive 92/21/EEC;
- 2) number of cylinders to be considered are those that can be connected to the regulator(s) installed by the manufacturer.

**b) Mass of the liquids in:**

- 1) fresh water storage and heating system(s) in accordance with Directive 92/21/EEC;
- 2) central heating system – full;
- 3) waste water tank – empty;
- 4) toilet flushing tank – full;
- 5) toilet waste holding tank – empty;
- 6) essential fluids for the use of any other items of standard equipment – full.

**c) Electrical supply**

- 1) allowance of 4 kg for the low voltage (LV) connection cable;
- 2) mass of the auxiliary battery(s), if provided or when provision has been included.

**5 Calculation of user payload****5.1 General**

The user payload is the result of the addition of the masses for conventional load, personal effects and optional equipment.

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## 5.2 Conventional load

The mass of the conventional load is the mass allowance that a manufacturer shall have to make to allow for carrying passengers (excluding the driver). This mass is calculated by multiplying by 75 kg the number of passenger seating positions designated by the manufacturer for use when the vehicle is in motion.

## 5.3 Personal effects

### 5.3.1 General

Personal effects are typically items common to all occupants such as food, cutlery, pots, pans, first aid box, maps, portable chemical toilet, levelling blocks, TV and radio, fire blanket or fire extinguisher and items personal to each occupant such as clothing, footwear, bedding, books, cameras, toys and toiletries. Bicycles, boats, sail boards, sports equipment, etc. are also included whether carried on racks or otherwise.

### 5.3.2 Calculation of allowance

The mass allowance  $M$  for personal effects, in kilograms, for a motor caravan shall be calculated from the following formula:

$$M = 10n + 10l \quad (1)$$

where

$l$  is the overall length of the motor caravan in metres or, in the case of a de-mountable unit, the overall length of the habitation capsule;

$n$  is the maximum number of passengers, including the driver, as stated by the manufacturer.

NOTE It is essential that despite permitted tolerances in the mass in running order the personal effects allowance is not eroded below either 100 kg or as calculated in 5.3.2, whichever is the lower.

## 5.4 Optional equipment

The manufacturer shall specify the mass of each item of optional equipment offered including the mass of any fluids required for its safe and proper functioning.

NOTE Examples for optional equipment offered are air conditioning, bicycle rack.

## 6 User's handbook

### 6.1 Information on masses

The manufacturer shall state in the user's handbook of the motor caravan, the following information including the definitions:

- maximum technically permissible laden mass and registration mass, in kilograms;
- mass of the vehicle in running order, in kilograms;
- mass of the user payload, in kilograms;
- mass of the essential habitation equipment, in kilograms.
- mass of the conventional load (passengers), in kilograms;



- f) mass of the optional equipment, in kilograms;
- g) mass of the personal effects, in kilograms.

## 6.2 Information about load spread

The manufacturer shall give information and general principles related to the correct distribution of the various loads.

## 6.3 Regulatory and safety advice

The manufacturer shall also include the following statements in the user's handbook:

- a) PLEASE TAKE CARE TO ENSURE THAT YOU HAVE ALLOWED FOR THE MASSES OF ALL ITEMS YOU INTEND TO CARRY IN THE MOTOR CARAVAN. e.g. passengers, optional equipment, essential habitation equipment and personal effects such as clothing, food, pets, bicycles, sailboards, sports equipment etc.
- b) **WARNING** — UNDER NO CIRCUMSTANCES SHOULD THE REGISTRATION MASS OF THIS MOTOR CARAVAN BE EXCEEDED.
- c) THE MASS IN RUNNING ORDER CONTAINS A PROVISION FOR THE MASSES OF LIQUIDS, GAS ETC. (SEE ESSENTIAL HABITATION EQUIPMENT IN USER HANDBOOK). PART OF THIS PROVISION CAN ALSO BE UTILISED AS ADDITIONAL PAYLOAD IF FOR EXAMPLE YOU WISH TO TRAVEL WITH WATER TANKS EMPTY OR WITH NO GAS CYLINDERS.

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