INIMESTE, KAUPADE NING MUU VEOSE TRANSPORDIKS ETTENÄHTUD KERGED MOOTORSÕIDUKID, MILLE SUHTES EI KOHALDATA MAANTEESÕIDUKITE TÜÜBIKINNITUSMENETLUST. KÕRVUTI ASETSEVATE ISTMETEGA (SIDE-BY-SIDE) BAGID. OHUTUSNÕUDED JA KATSEMEETODID

Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use - Side by Side Vehicles - Safety requirements and test methods

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16990:2020 sisaldab Euroopa standardi EN 16990:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 16990:2020 consists of the English text of the European standard EN 16990:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.05.2020.	Date of Availability of the European standard is 20.05.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 43.080.99, 43.140

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 16990

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English Version

Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use - Side by Side Vehicles - Safety requirements and test methods

Véhicules motorisés légers non soumis à la réception par type pour le transport de personnes, de marchandises ainsi que d'autres équipements - Véhicules côte à côte - Exigences de sécurité et méthodes d'essai

Motorisierte (ride-on) Fahrzeuge ohne Zulassung für den öffentlichen Straßenverkehr, bestimmt für den Transport von Personen und Gütern - Side-by-Side-Fahrzeuge - Sicherheitstechnische Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 7 March 2020.

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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
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents

European foreword

This document (EN 16990:2020) has been prepared by Technical Committee CEN/TC 354 “Non-type approved light motorized vehicles for the transportation of persons and goods and related facilities -”, 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 November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2006/42/EC.

For relationship with EU Directive 2006/42/EC, see informative Annex ZA, which is an integral part of this document.

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, Turkey and the United Kingdom.

Introduction

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organizations, market surveillance etc.)

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e.g. for maintenance (small, medium and large enterprises);

— consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

This document is a type C standard as stated in EN ISO 12100:2010.

The vehicles concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for vehicles that have been designed and built according to the provisions of this type C standard.

1 Scope

This document applies to Side by Side vehicles propelled by internal combustion engines using liquid fuels (petrol, diesel, bio-fuels, lpg) and/or electric drive, intended to be used primarily on unpaved surfaces and not intended to be used on public roads[1)].

This document defines safety requirements relating to the elements of design, operation, and maintenance of Side by Side vehicles and deals with all significant hazards, hazardous situations and events relevant to Side by Side vehicles, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Annex M). It deals with the significant hazards during the whole lifecycle of the product as defined in 5.3 of EN ISO 12100:2010,

This document is not dealing with:

— Side by Side Vehicles exclusively intended for competition[2)];

— Side by Side Vehicles fitted with side facing seats

— Side by Side Vehicles intended to be operated by persons under the age of 14 years;

— agricultural and forestry tractors coming under Regulation (EU)167/2013;

— 3 or 4 wheeled vehicles coming under Regulation (EU)168/2013;

— accessories for additional functions[3)];

— the additional hazards due to the use of the Side by Side Vehicle on public roads;

— the additional hazards due to the use of remote control.

This document is not intended to cover all terrain vehicles (ATVs - Quads) as defined by EN 15997:2011.

This document is not applicable to Side by Side vehicles which are manufactured before the date of its publication as EN.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

CEN/TR 15172-1, *Whole-body vibration - Guidelines for vibration hazards reduction - Part 1: Engineering methods by design of machinery*

CR 1030-1, Hand-arm vibration — Guidelines for vibration hazards reduction — Part 1: Engineering methods by design of machinery

1) In general, vehicles intended for use on public roads have to fulfil specific requirements and/or require official "type-approval".

2) The main criterion to be applied to judge whether vehicles are to be considered as exclusively intended for competition is whether they are designed according to the technical specifications laid down by one of the officially recognised racing associations.

3) Towing hook and load carrying provisions remaining within the vertical projection onto the ground of the vehicle are not considered as accessories.

EN 614-1:2006+A1:2009, *Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles*

EN ISO 11201:2010, *Acoustics - Noise emitted by machinery and equipment - Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections (ISO 11201:2010)*

EN 14930:2007+A1:2009, *Agricultural and forestry machinery and gardening equipment - Pedestrian controlled and hand-held machines - Determination of accessibility of hot surfaces*

EN 60335-2-29:2004, *Household and similar electrical appliances - Safety - Part 2-29: Particular requirements for battery chargers*

EN 61310-1:2008, *Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals*

EN ISO 3471:2008, *Earth-moving machinery - Roll-over protective structures - Laboratory tests and performance requirements (ISO 3471:2008)*

EN ISO 3744:2010, *Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering methods for an essentially free field over a reflecting plane (ISO 3744:2010)*

EN ISO 4871:2009, *Acoustics - Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 5349-1:2001, *Mechanical vibration - Measurement and evaluation of human exposure to hand-transmitted vibration - Part 1: General requirements (ISO 5349-1:2001)*

EN ISO 8041:2005, *Human response to vibration - Measuring instrumentation (ISO 8041:2005)*

EN ISO 11688-1:2009, *Acoustics - Recommended practice for the design of low-noise machinery and equipment – Planning (ISO/TR 11688-2:1995)*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13857:2008, *Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*

EN ISO 14120:2015, *Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards (ISO 14120:2015)*

ISO 3463:2006, *Tractors for agriculture and forestry — Roll-over protective structures (ROPS) — Dynamic test method and acceptance conditions*

ISO 5006:2017, *Earth-moving machinery — Operator's field of view — Test method and performance criteria*

ISO 5348:1998, *Mechanical vibration and shock — Mechanical mounting of accelerometers*

ISO 5700:2013, *Roll-over protective structures (ROPS) (cab or frame) of wheeled or tracked tractors for agriculture and forestry - Static test method and acceptance conditions*

ISO 12003-1:2008, *Roll-over protective structures (ROPS) Front Mounted on narrow-track wheeled agricultural and forestry tractors - Procedures for both static and dynamic testing*

ISO 12003-2:2008, *Roll-over protective structures (ROPS) Rear Mounted on narrow-track wheeled agricultural and forestry tractors - Procedures for both static and dynamic testing*

OECD test code 3, OECD standard code for the official testing of protective structures on agricultural and forestry tractors (dynamic test) *(Edition 2015 – July 2014)*

OECD test code 4, OECD standard code for the official testing of protective structures on agricultural and forestry tractors (static test) *(Edition 2015 – July 2014)*

OECD test code 6, OECD standard code for the official testing of front mounted roll-over protective structures on narrow-track wheeled agricultural and forestry tractors *(Edition 2015 – July 2014)*

OECD test code 7, OECD standard code for the official testing of rear mounted roll-over protective structure on narrow-track wheeled agricultural and forestry tractors *(Edition 2015 – July 2014)*

SAE J 141 *(JUN 95), Seat Belt Hardware – Performance Requirements*

SAE J 383 *(201303), Motor Vehicle Seat Belt Anchorages – Design Recommendations*

SAE J 384 *(JUN 94), Motor Vehicle Seat Belt Anchorages – Test Procedures*

SAE J 386 *(201208), Operator Restraint System for Off-Road Work Machines*

SAE J 2292 *(200612 or JAN 2016), Combination Pelvic/Upper Torso (Type 2) Operator Restraint Systems for Off-Road Work Machines*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

• IEC Electropedia: available at http://www.electropedia.org/

• ISO Online browsing platform: available at http://www.iso.org/obp

3.1
Side by Side vehicle
SbS
self-propelled, operator-controlled, non-articulated vehicle operable on four or more wheels, with a gross vehicle mass of 2000 kg or less, a minimum mass in running order of 300 kg and a maximum design speed of > 32 km/h, designed to transport persons and/or cargo and pull and push equipment where the operator and at least one passenger are sitting side by side on non-straddle seats

Note 1 to entry: A Side by Side vehicle is steered by a control other than a handlebar and is designed for recreational or utility purposes and carry no more than 6 occupants.

3.2
brake lever or
handle
hand-operated control which, when activated, causes the brake(s) to be applied