

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)



BSI Standards Publication

## Forestry machinery - Wood chippers - Safety

---

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

## National foreword

This British Standard is the UK implementation of EN 13525:2020. It supersedes BS EN 13525:2005+A2:2009, which is withdrawn.

BSI, as a member of CEN, is obliged to publish EN 13525:2020 as a British Standard. However, attention is drawn to the fact that during the development of this European Standard, the UK committee voted against its approval.

The UK committee, AGE/29, has voted against EN 13525 because of concerns that it does not seek to improve safety and does not cover essential noise criteria.

In particular, the committee is concerned that certain clause criteria introduced in the standard are unsuitable and do not cover many state of the art systems available in the marketplace. Respective clauses that the UK committee considered to be inconsistent with the rest of the content of the standard received recommendations of change by the committee.

Specifically, the UK committee is of the opinion that the wording of clause 5.5 and reference to the verification of requirements on noise and measurement of noise emission do not reflect actual requirements, because of anomalies in Annex B which should be informative and not normative, whilst noise criteria is developed to bring the standard into line with the outdoor noise directive (2000/14/EC). Annex B, and in particular clause B.5.3, does not show a realistic test and requires a test that is representative and state of the art.

The UK committee also believes that figures 2, 20 and 21 are incomplete and cause confusion. Figure 2 requires the addition of the lower chute edge to be shown. Figure 20 and 21 require 'P' to be added with an explanation because the key does not correlate with the drawing. The clause 4.2.5.2.2.1 does not define the lower protection device and this is required to aid understanding.

The UK committee also believes that Annex ZA has not covered relevant clauses of the machinery directive 2006/42/EC as required. Clauses 1 to 1.26, 1.39 and 1.5.14 require inclusion as this is a requirement of the latest version of the Annex ZA.

The UK participation in its preparation was entrusted to Technical Committee AGE/29, Forestry machinery.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020  
Published by BSI Standards Limited 2020

ISBN 978 0 580 93321 9

ICS 65.060.80

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2020.

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

**Amendments/corrigenda issued since publication**

Date

Text affected

---

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

## EUROPÄISCHE NORM

April 2020

ICS 65.060.80

Supersedes EN 13525:2005+A2:2009

English Version

## Forestry machinery - Wood chippers - Safety

Machines forestières - Déchiqueteuses - Sécurité

Forstmaschinen - Buschholzhacker - Sicherheit

This European Standard was approved by CEN on 13 February 2020.

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.

CEN members are the national standards bodies of 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

<b>Contents</b>		<b>Page</b>
European foreword.....		4
Introduction .....		5
1	Scope .....	6
2	Normative references .....	7
3	Terms and definitions .....	8
4	Safety requirements and/or protective/risk reduction measures.....	15
4.1	General.....	15
4.2	Operator controls.....	15
4.2.1	General.....	15
4.2.2	Starting the machine.....	16
4.2.3	Stopping the machine .....	16
4.2.4	Infeed controls .....	16
4.2.5	Lower and Side Protective Device(s) .....	17
4.2.6	Top Stop Device .....	22
4.2.7	Emergency stop.....	26
4.2.8	Combination of controls .....	27
4.2.9	Safety and reliability of control systems .....	27
4.3	Protection against mechanical hazards .....	27
4.3.1	Stability.....	27
4.3.2	Risk of break-up during operation .....	28
4.3.3	Hazards related to infeed components and chipping components.....	28
4.3.4	Risks due to ejected objects .....	40
4.3.5	Protection against access to moving power transmission parts.....	41
4.4	Protection against non-mechanical hazards.....	41
4.4.1	Noise .....	41
4.4.2	Hydraulic components .....	42
4.4.3	Hot surfaces.....	42
4.4.4	Electrical hazards.....	42
4.4.5	Exhaust fumes .....	43
4.5	Preparation for transport and maintenance .....	43
5	Verification of the safety requirements and/or measures .....	44
5.1	General.....	44
5.2	Stability.....	44
5.3	Chipping components risk of break-up.....	45
5.4	Hot surfaces.....	46
5.4.1	Temperature measuring equipment.....	46
5.4.2	Test method .....	46
5.4.3	Test acceptance.....	46
5.5	Verification of requirements on noise – Measurement of noise emission .....	46
6	Information for use .....	47
6.1	Instruction handbook.....	47
6.2	Marking.....	49
6.3	Warnings.....	49
Annex A (normative) List of significant hazards.....		51

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

<b>Annex B</b> (normative) <b>Noise test code - Engineering method (grade 2)</b> .....	55
<b>B.1</b> <b>Scope</b> .....	55
<b>B.2</b> <b>Emission sound pressure level determination</b> .....	55
<b>B.3</b> <b>A-weighted sound power level determination</b> .....	55
<b>B.4</b> <b>Installation and mounting conditions</b> .....	56
<b>B.5</b> <b>Operating conditions</b> .....	56
<b>B.6</b> <b>Measurement uncertainties</b> .....	57
<b>B.7</b> <b>Information to be recorded and reported</b> .....	57
<b>B.8</b> <b>Declaration and verification</b> .....	57
<b>Annex C</b> (normative) <b>Integrated infeed conveyor</b> .....	59
<b>Annex D</b> (normative) <b>Lower and Side Protective Devices tests</b> .....	62
<b>D.1</b> <b>Robustness of LSPD (Lower and Side Protective Devices)</b> .....	62
<b>D.1.1</b> <b>General</b> .....	62
<b>D.1.2</b> <b>Test n° 1 – Robustness of LPD (Lower Protective Device)</b> .....	62
<b>D.1.3</b> <b>Test n° 2 – Robustness of LPD (Lower Protective Device)</b> .....	62
<b>D.1.4</b> <b>Test n° 3 – Robustness of SPD (Side Protective Device)</b> .....	62
<b>D.2</b> <b>Functioning of LSPD (Lower and Side Protective Devices)</b> .....	62
<b>D.2.1</b> <b>General</b> .....	62
<b>D.2.2</b> <b>Test n° 1 – Functioning of LPD (Lower Protective Device)</b> .....	62
<b>D.2.3</b> <b>Test n° 2 – Functioning of SPD (Side Protective Device)</b> .....	63
<b>Annex E</b> (informative) <b>Summary of features of the different stopping functions</b> .....	67
<b>Annex ZA</b> (informative) <b>Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC aimed to be covered</b> .....	72
<b>Bibliography</b> .....	74

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

## **European foreword**

This document (EN 13525:2020) has been prepared by Technical Committee CEN/TC 144 "Tractors and machinery for agriculture and forestry", 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 October 2020, and conflicting national standards shall be withdrawn at the latest by October 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 supersedes EN 13525:2005+A2:2009.

The main changes compared to the previous edition concern requirements to deal with risks related to moving parts and more particularly to moving parts involved in the process.

This has resulted in a substantial revision of the chapters dealing with operator controls (4.2) and with protection against mechanical hazards (4.3).

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(s).

For relationship with EU Directive, 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.



This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

## **Introduction**

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

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.

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

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

This is a preview of "BS EN 13525:2020". [Click here to purchase the full version from the ANSI store.](#)

## 1 Scope

This document specifies safety requirements and their verification for design and construction of, i.e. self-propelled, mounted, semi-mounted and trailed, wood chippers used in forestry, agriculture, horticulture and landscaping.

This document applies to chippers, used when stationary, which are manually loaded with wood through a horizontal or near horizontal infeed chute and where the infeed action is performed by the chipping components acting as infeed components or by separate integrated infeed components such as rollers or conveyors integral to the infeed chute. Wood chippers may be powered either by an external power take-off, hydraulics etc. or by an integral power source such as an internal combustion engine.

This document does not cover:

- requirements relating to national road regulations arising from transport between work sites;
- hazards arising from any self-propelled function;
- hazards arising from the transmission of power from an external power source – e.g. power take-off drive shafts;
- any machines where the infeed chute is fitted with an extension table or an integrated conveyor that is protruding beyond the outermost lower edge of the infeed chute and the Lower Protective Device of the infeed chute;
- hazards arising from the engine pull starting of an integral power source;
- hazards arising from mechanical loading;
- vertical infeed chute chippers;
- electromagnetic aspects of the chippers;
- shredders/chippers to be covered by EN 13683;
- any machines that are only loaded mechanically;
- additional mechanical discharge systems for woodchips which are not part of the chipping mechanism e.g. conveyors.

For machines that can be both manually and mechanically loaded, this document is only covering the safety of the manual loading.

NOTE 1 Any additional requirements related to use with both mechanical and manual feed that could affect safe use or which are necessary to maintain the integrity of protective devices are outside the scope of this document. Such additional measures are intended to be determined by risk assessment carried out by the manufacturer.

This document deals with all significant hazards, hazardous situations and events relevant to wood chippers, when they are used as intended and under the conditions foreseeable by the manufacturer (see Annex A).

In addition, it specifies the type of information to be provided by the manufacturer on the safe use of these machines.

It is not applicable to environmental hazards (except noise).

NOTE 2 The noise test code described in this document does not comply with the outdoor noise directive 2000/14/EC.