

## საქართველოს სტანდარტი

---

სასოფლო-სამეურნეო და სატყეო მოწყობილობები- გრძელი გამყოფების  
უსაფრთხოება- ნაწილი 1: სოლისებრი გამყოფები

საქართველოს სტანდარტებისა და მეტროლოგიის  
ეროვნული სააგენტო  
თბილისი

# სსტ ენ 609-1:2017/2018

## საინფორმაციო მონაცემები

1 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს 2018 წლის 27 აპრილის № 39 და 2018 წლის 7 მარტის № 14 განკარგულებებით

2 მიღებულია თავფურცლის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 609-1:2017 „სასოფლო-სამეურნეო და სატყეო მოწყობილობები- გრძელი გამყოფების უსაფრთხოება- ნაწილი 1: სოლისებრი გამყოფები”

### 3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2018 წლის 27 აპრილი №268-1.3-012928

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით გავრცელება

English Version

Agricultural and forestry machinery - Safety of log splitters  
- Part 1: Wedge splitters

Matériel agricole et forestier - Sécurité des fendeuses  
de bûches - Partie 1 : Fendeuses à coin

Land- und Forstmaschinen - Sicherheit von  
Holzspaltmaschinen - Teil 1: Keilspaltmaschinen

This European Standard was approved by CEN on 2 October 2016.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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: Avenue Marnix 17, B-1000 Brussels

**Contents**

Page

European foreword..... 4

Introduction ..... 5

**1 Scope ..... 6**

**2 Normative references ..... 6**

**3 Terms and definitions ..... 8**

**4 List of significant hazards ..... 11**

**5 Safety requirements and/or protective measures ..... 13**

5.1 General..... 13

5.2 Electrical equipment..... 13

5.3 Control systems ..... 13

5.3.1 General..... 13

5.3.2 Reliability of the control systems..... 14

5.3.3 Ergonomic requirements of control actuators..... 14

5.4 Starting and stopping of the power source..... 15

5.4.1 General..... 15

5.4.2 Stopping of other than electrically powered machines..... 15

5.4.3 Stopping of the electrically powered machines ..... 15

5.5 Emergency stop..... 15

5.6 Two-hand control device..... 15

5.7 Power supply ..... 16

5.7.1 Electrically powered machines ..... 16

5.7.2 Machines powered by an external power supply ..... 16

5.7.3 Machines powered by an internal combustion engine..... 16

5.7.4 Machines with two or more power supplies ..... 17

5.8 Hydraulic equipment..... 17

5.9 Safe guarding of the splitting zone..... 17

5.9.1 General..... 17

5.9.2 Horizontal short log wedge splitter..... 17

5.9.3 Horizontal long log wedge splitter..... 22

5.9.4 Vertical short log wedge splitter ..... 27

5.9.5 Vertical long log wedge splitter ..... 33

5.10 Log holding requirements..... 37

5.10.1 General..... 37

5.10.2 Prior to and during the splitting..... 38

5.10.3 After the splitting ..... 38

5.11 Return movement of the moving device of the splitter ..... 40

5.12 Log-handling device ..... 41

5.13 Requirements for hauling winches that can be attached to a wedge splitter ..... 42

5.14 Bluntness of edges ..... 43

5.15 Stability..... 43

5.16 Transport and handling of the machine ..... 43

5.16.1 General..... 43

5.16.2 Ergonomic requirements ..... 43

5.17 The guarding of power transmission from an external power source ..... 44

საინფორმაციო ნაწილი. სრული ტექსტის სახსრავად შეიძინეთ სტანდარტი.

5.18	Unprotected gravity moving objects with semi-automatically controlled movement.....	44
6	Verification of safety requirements.....	44
7	Information for use.....	46
7.1	Marking of machine.....	46
7.2	Warnings on machine.....	46
7.3	Instruction handbook.....	47
7.3.1	General.....	47
7.3.2	Other information.....	47
Annex A	(normative) Log holding test for vertical log wedge splitters.....	49
A.1	Long log wedge splitters – Test requirements for the log fixing device.....	49
A.1.1	General.....	49
A.1.2	Holding force.....	49
A.2	Short log wedge splitters – Test requirements for the log fixing device.....	50
A.2.1	General.....	50
A.2.2	Holding force.....	50
Annex B	(normative) Examples of solutions and verification of the two-hand control device for wedge splitters.....	52
B.1	Prevention of accidental actuation and of defeat.....	52
B.2	Example for prevention of defeat using one hand.....	52
B.3	Example for prevention of defeat using hand and elbow of the same arm.....	52
B.4	Example for prevention of defeat using the forearm(s) or elbow(s).....	53
B.5	Example for prevention of defeat using the hand and other parts of the body e.g. knee(s).....	54
Annex C	(normative) Testing requirements for hot exhaust surfaces and hot surfaces.....	55
C.1	Temperature measuring equipment.....	55
C.2	Method of test.....	55
C.3	Test acceptance.....	55
Annex D	(normative) Stability test for log splitters equipped with a hauling winch.....	57
D.1	General.....	57
D.2	Lateral stability test and requirements.....	57
Annex ZA	(informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC on machinery.....	58
Bibliography	.....	59

## European foreword

This document (EN 609-1:2017) 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 July 2017, and conflicting national standards shall be withdrawn at the latest by June 2018.

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 609-1:1999+A2:2009.

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.

EN 609, *Agricultural and forestry machinery — Safety of log splitters*, is currently composed with the following parts:

- *Part 1: Wedge splitters;*
- *Part 2: Screw splitters.*

The new edition of this standard proposes a new specific approach, which evaluates the dangers of specifically this type of machine. Machines have been divided into four categories, which are machines for short logs or long logs with splitting direction of horizontal or vertical to reflect the differences concerning safety issues.

The main changes in this new edition are the following:

- four (4) different machine categories, which all have machine specific safety requirements and options (Horizontal and Vertical – Long logs and Short logs);
- more specific interpretation of safety distances for these specific types of machines (EN 13857 and machine specific distances);
- specific requirements for log handling, which includes holding before, during and after the splitting, but also log lifting;
- improved ergonomic requirements, which consider the actual use of the machine;
- requirements for AOPD;
- requirements for hauling winches that can be, and often are, attached to the wedge splitters;
- new tests and verifications, how to interpret the standard.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom..

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძლება სტანდარტი.

## Introduction

The structure of safety standards in the field of machinery is as follows:

- a) type-A standards (basic standards) giving basic concepts, principles for design, and general aspects that can be applied to machinery;
- b) type-B standards (generic safety standards) dealing with one or more safety aspects or one or more types of safeguards that can be used across a wide range of machinery:
  - 1) type-B1 standards on particular safety aspects (e.g. safety distances, surface temperature, noise);
  - 2) type-B2 standards on safeguards (e.g. two-hand control device, interlocking devices, pressure-sensitive devices, guards);
- c) type-C standards (machinery safety standards) dealing with detailed safety requirements for a particular machine or group of machines.

This document is a type “C” standard as defined 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 and 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 other standards, for machines that have been designed and built in accordance with the requirements of the provisions of this type C standard.