

**Tuletõrjepumbad. Löökpadruga tuletõrje  
tsentrifugaalpumbad. Osa 1: Klassifikatsioon. Üld-  
ja ohutusnõuded KONSOLIDEERITUD TEKST**

Fire-fighting pumps - Fire-fighting centrifugal pumps  
with primer - Part 1: Classification - General and safety  
requirements CONSOLIDATED TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1028-1:2002+A1:2008 sisaldab Euroopa standardi EN 1028-1:2002+A1:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 18.08.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 09.07.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1028-1:2002+A1:2008 consists of the English text of the European standard EN 1028-1:2002+A1:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 18.08.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 09.07.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** fire equipment, fire fighting, fire pumps, fire safety, firefighting, firefighting equipment, fire-fighting pumps, high- pressure pumps, incrimption, inspection, marking, materials, motor pumps, painting, pumps, specification (approval), specifications, testing

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Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

English Version

**Fire-fighting pumps - Fire-fighting centrifugal pumps with primer  
- Part 1: Classification - General and safety requirements**

Pompes à usage incendie - Pompes centrifuges à usage  
incendie avec dispositif d'amorçage - Partie 1 :  
Classification - Prescriptions générales et de sécurité

Feuerlöschpumpen - Feuerlöschkreispumpen mit  
Entlüftungseinrichtung - Teil 1: Klassifizierung - Allgemeine  
und Sicherheitsanforderungen

This European Standard was approved by CEN on 8 April 2002 and includes Amendment 1 approved by CEN on 6 June 2008.

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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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.







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## Foreword

This document (EN 1028-1:2002+A1:2008) has been prepared by Technical Committee CEN/TC 192 "Fire service equipment", 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 January 2009, and conflicting national standards shall be withdrawn at the latest by January 2009.

This document includes Amendment 1, approved by CEN on 2008-06-06.

This document supersedes EN 1028-1:2002.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

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).

**A1** For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. **A1**

This part of this European Standard shall be applied only in conjunction with part 2 of EN 1028 "*Verification of general and safety requirements*".

EN 1028 "*Fire-fighting pumps – Fire-fighting centrifugal pumps with primer*" comprises two parts:

- *Part 1: Classification — General and safety requirements;*
- *Part 2: Verification of general and safety requirements.*

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 United Kingdom.

## 0 Introduction

This European Standard is a type C standard as stated in EN 292 and EN 1070.

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

Where 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 machines that have been designed and built in accordance with the provisions of this type C standard.

This Standard has been prepared as a harmonized standard to provide one means of conformity with essential requirements of the Machinery Directive and associated EFTA Regulations.

While producing this standard it was assumed that:

- a) only trained persons operate the machine;
- b) components without specific requirements are:
  - 1) designed in accordance with the usual engineering practice and calculation codes, including all failure modes;
  - 2) of sound mechanical construction;
  - 3) of materials with adequate strength and of suitable quality;
  - 4) of materials free of defects;

NOTE General hazards due to hydraulic and pneumatic equipment are dealt with in standards for common use such as EN 982, EN 983.

- c) harmful materials (e.g. asbestos) are not used as part of the machine;
- d) components are kept in good repair and working order, so that the required characteristics remain;
- e) by design of the load bearing elements, a safe operation of the machine is assured for loading, from 0 % to 100 % of the rated possibilities and during the tests;
- f) to ensure the correct functioning of the equipment, the ambient temperature is maintained between -15 °C (for special conditions, -30 °C; see 6.12) and 40 °C;

NOTE Directly around the pump the temperature can be 20 °C higher.

- g) the manufacturer and the user have agreed the features of the machinery and the operating conditions;
- h) the place of installation enables safe usage of the machine.

## 1 Scope

This standard applies for centrifugal pumps with priming devices for fire-fighting use supplied separately without driver and couplings. Fire-fighting centrifugal pumps with primer are defined as terminated by their inlet and outlet connections as well as by their shaft ends.

This standard applies for fire-fighting centrifugal pumps with priming devices for use under ambient temperatures between -15 °C and 40 °C.

NOTE For special conditions, -30 °C; see 6.12.

This standard does not apply to fire-fighting centrifugal pumps with primer of which the only power source is directly applied manual effort.

This standard specifies the classification and general requirements for fire-fighting centrifugal pumps with priming devices with a nominal delivery rate of up to 6000 l/min.

This standard deals with significant hazards listed in clause 4, hazardous situations and events during the commissioning, operation and maintenance of fire-fighting centrifugal pumps with priming devices, used as intended and under the conditions foreseen by the manufacturer or the manufacturer's authorized representative. In addition, fire-fighting centrifugal pumps with priming devices shall conform as appropriate to EN 292 for hazards not covered by this standard.

This standard does not deal with the detailed verification of general and safety requirements and/or protective measures. These are covered in EN 1028-2 "*Verification of general and safety requirements*".

This standard does not deal with the technical safety requirements for the design or manufacture of drivers or of auxiliary equipment. It does not cover risks directly arising from means provided for the portability, transportability, and mobility of pump units during or between periods of operation, or requirements for transmission shafts linking self-propelled machinery to a pump. In addition, this standard does not cover:

- operation subject to special rules (e. g. potentially explosive atmospheres);
- hazards occurring due to decommissioning;
- hazards occurring during handling;
- hazards occurring when in use (e. g. on public roads).

This standard does not apply to fire-fighting centrifugal pumps with primer that are manufactured before the date of publication by CEN of this standard.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 292-1:1991, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology.*

EN 292-2:1991, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles and specifications.*

EN 292-2/A1:1995, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles and specifications; Amendment A1.*

EN 294:1992, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper limbs.*

EN 349:1993, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body.*

EN 547-2:1996, *Safety of machinery — Human body measurements — Part 2: Principles for determining the dimensions required for access openings.*

EN 547-3:1996, *Safety of machinery — Human body measurements — Part 3: Anthropometric data.*

EN 842:1996, *Safety of machinery — Visual danger signals — General requirements, design and testing.*

EN 894-1:1997, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 1: General principles for human interactions with displays and control actuators.*

EN 894-2:1997, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays.*

EN 894-3:2000, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 3: Control actuators.*

EN 953:1997, *Safety of machinery — General requirements for the design and construction of fixed and movable guards.*

EN 1028-2:2002, *Fire-fighting pumps — Fire-fighting centrifugal pumps with primer — Part 2: Verification of general and safety requirements.*

EN 1050:1996, *Safety of machinery — Principles for risk assessment.*

EN 1070:1998, *Safety of machinery — Terminology.*

EN 25199:1992, *Technical specifications for centrifugal pumps — Class II (ISO 5199:1986).*

EN 60204-1:1997, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:1997).*

EN 60529:1991+A1:2000, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989) + Amendment A1 (IEC 60529:1989/A1:1999).*

EN 61310-2:1995, *Safety of machinery — Indication, marking and actuation — Part 2: Requirements for marking (IEC 61310-2:1995).*

EN ISO 9905:1997, *Technical specifications for centrifugal pumps — Class I (ISO 9905:1994).*

EN ISO 9908:1997, *Technical specifications for centrifugal pumps — Class III (ISO 9908:1993).*