

# norm

# NEN-EN 1846-3

Firefighting and rescue service vehicles -  
Part 3: Permanently installed equipment -  
Safety and performance

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Preview

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Will supersede EN 1846-3:2002+A1:2008

English Version

## Firefighting and rescue service vehicles - Part 3: Permanently installed equipment - Safety and performance

Véhicules des services de secours et de lutte contre l'incendie - Partie 3: Equipements installés à demeure - Sécurité et performances

Feuerwehrfahrzeuge - Teil 3: Fest eingebaute Ausrüstung - Sicherheits- und Leistungsanforderungen

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## Foreword

This document (prEN 1846-3:2011) has been prepared by Technical Committee CEN/TC 192 "Fire service equipment", the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 1846-3+A1:2008.

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 an EC Directive.

For the relationship with this EC Directive, see informative Annex ZA, which is an integral part of this document.

EN 1846 "Firefighting and rescue service vehicles" is composed of three parts:

- Part 1: *Nomenclature and designation*;
- Part 2: *Common requirements — Safety and performance*;
- Part 3: *Permanently installed equipment — Safety and performance*.

Preview

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## Introduction

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

This document is a complement to EN 1846-2:2009 and deals with some optional specific permanently installed equipment used by firefighters.

The equipment 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 the other standards, for machines that have been designed and built according to the provisions of this type C standard.

This document also deals with the performance requirements which apply to the equipment as defined in the scope.

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## 1 Scope

**1.1** This Part of this European Standard specifies the minimum requirements for safety and performance of some optional specific permanently installed equipment on firefighting and rescue service vehicles, operated by trained persons, as designated in EN 1846-1 and specified in EN 1846-2:2009.

NOTE 1 Categories and mass classes of the firefighting and rescue service vehicles are given in EN 1846-1.

The permanently installed equipment dealt with in this Part of this European Standard is given below:

- water installation;
- additive installation;
- monitor;
- equipment gantries;
- demountable systems using a hydraulic hook arm.

NOTE 2 This Part of this European Standard should be read in conjunction with any national regulations in force for vehicles using the public roads and with any EU Directives and associated EFTA regulations in force relevant to vehicles and their equipment.

For the purposes of this European Standard, the normal ambient temperature range is - 15 °C to + 35 °C.

NOTE 3 In the case of utilization outside this temperature range, the particular temperature range should be specified by the user.

**1.2** This European Standard does not deal with the following types of fire-fighting or rescue vehicles or equipment:

- vehicles designed exclusively for carrying personnel;
- vehicles with a gross laden mass not exceeding 3 t;
- boats;
- aircraft;
- railway vehicles;
- ambulances (see EN 1789);
- provisions for removable equipment driven by PTO;
- airport vehicles in the scope of the recommendations of the International Civil Aviation Organisation (ICAO).

**1.3** This European Standard deals with the technical requirements to minimise the hazards listed in Clause 4 which can arise during operational use, routine checking and maintenance of firefighting and rescue service vehicles when carried out in accordance with the specifications given by the manufacturer or his authorised representative.

It does not cover the hazards generated by:

- non-permanently installed equipment i.e. portable equipment carried on the vehicle;
- use in potentially explosive atmospheres;

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- commissioning and decommissioning;
- noise (as permanently installed equipment cannot be operated separately from the vehicle, this hazard is covered in Part 2);
- electromagnetic compatibility.

Additional measures not dealt with in this European Standard may be necessary for specific use (e.g. fire in natural environment, flooding, etc.).

**1.4** This document is not applicable to the equipment which is manufactured before its date of publication by CEN.

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

EN 659, *Protective gloves for firefighters*

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

EN 982, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

EN 1028-1+A1:2008, *Fire-fighting pumps — Fire-fighting centrifugal pumps with primer — Part 1: Classification, general and safety requirements*

EN 1846-1, *Firefighting and rescue service vehicles — Part 1: Nomenclature and designation*

EN 1846-2:2009, *Firefighting and rescue service vehicles — Part 2: Common requirements - Safety and performance*

EN 1947, *Fire-fighting hoses — Semi-rigid delivery hoses and hose assemblies for pumps and vehicles*

EN 14710-1+A2:2008, *Fire-fighting pumps — Fire-fighting centrifugal pumps without primer — Part 1: Classification, general and safety requirements*

EN 15767-1, *Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable monitors — Part 1: General requirements for portable monitor assemblies*

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

EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)*

EN ISO 13850, *Safety of machinery — Emergency stop — Principles for design*

**3 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 1846-1, EN 1846-2 and the following apply.



**3.1****water installation**

combination of components for the collection, storage and delivery of water and/or water-additive mixture at varying pressures and delivery rates

**3.1.1****classification of the water installation**

combination of the delivery rate  $Q_1$  specified at pressure  $p_{a1}$  and at specified height  $d$

**3.1.2****height** $d$ 

difference of level between the standing surface of the vehicle and the water surface at the time of a pumping appliance suction operation

**3.1.3****standing surface of the vehicle**

surface on which the vehicle wheels are resting when it is operating

**3.1.4****standing surface of the operator**

surface on which the operator stands

**3.1.5****installed water pump**

pump permanently installed on a vehicle and driven by the motive power of the vehicle, or a pump complete with drive motor

**3.1.6****installed water tank**

container for storage of water for the service purposes

**3.1.7****supply and delivery connections for water**

inlet and outlet devices for joining hoses to the pipework installation

**3.1.8****pipework installation for water**

any system linking the installed water pump(s), the installed water tank(s) and the supply and delivery connections

**3.1.9****operating and control instruments for water**

controls and gauges necessary to operate and monitor the water installation system

**3.1.10****hosereel system**

rotating hose storage system with semi-rigid hose(s) permanently connected to the pipework installation

**3.1.11****wheeled hosereel**

hosereel designed for the storage, the transport and the deployment of layflat hose

**3.2****liquid additive**

addition to water to enhance firefighting capabilities e.g. foam concentrate, fire retardant

NOTE In this document, the term "additive" means "liquid additive".

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