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TOIMIMISNÕUDED

Double acting hydraulic rescue tools for fire and rescue  
service use - Safety and performance requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 13204:2016 sisaldab Euroopa standardi EN 13204:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 13204:2016 consists of the English text of the European standard EN 13204:2016.
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.
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English Version

## Double acting hydraulic rescue tools for fire and rescue service use - Safety and performance requirements

Matériels hydrauliques de désincarcération à double  
effet à usage des services d'incendie et de secours -  
Prescriptions de sécurité et de performance

Doppelt wirkende hydraulische Rettungsgeräte für die  
Feuerwehr und Rettungsdienste - Sicherheits- und  
Leistungsanforderungen

This European Standard was approved by CEN on 8 July 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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## European foreword

This document (EN 13204:2016) 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 March 2017, and conflicting national standards shall be withdrawn at the latest by March 2017.

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 13204:2004+A1:2012.

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(s), see informative Annex ZA, which is an integral part of this document.

The significant technical changes between this standard and the previous edition are the following:

- Major editorial changes:
- Clause 2: Normative references, updated
- Clause 4: Requirements and Verification:
  - Was Section Hazards, which is referenced to Annex A in 4.1.1.
  - Requirements are now followed directly by verification, these used to be separate Clause 5 Requirements and Clause 6 Verification.
  - Table 3. Cutting Capacity: Expanded classification to K (was H), square tube 35 × 3 (was 35 × 4)
  - Cutting table has been expanded to be able to rate larger cutters.
  - Powerpack and smart systems added
- Clause 5 Information for use, was chapter 7
- Clause 6 Marking, was chapter 8
- Annex A List of Hazards, updated references
- Annex C Product Performance Data Sheet = New, Annex C used to be Additional recommendations, which is now no longer included.
- Annex D General Verification Requirements, added. This is text moved from 6.1.
- Bibliography, updated version of standards

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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## 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 the 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 -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.

When compiling this document, it was assumed that:

- a) the manufacturer shall design and/or use components without specific requirements in accordance with the usual engineering practice and calculation codes, including all failure modes;
- b) only trained and competent persons will use and operate the machinery;
- c) the machinery is kept in good repair and working order, by a trained and competent person, so that the required characteristics remain despite wear;
- d) the working place is adequately lit;
- e) negotiations occur between the manufacturer and the purchaser concerning particular conditions for the use and places of use for the machinery related to health and safety;
- f) The manufacturer shall consider and minimize the impact to the environment during all stages of the product life cycle.

Battery tools and other powered rescue tools outside of the scope of this document are not covered in this revision of the document. However in future revision these tools will be integrated.



## 1 Scope

This European Standard specifies safety and performance requirements for double acting hydraulic rescue tools manufactured after the date of publication.

It is applicable to double acting hydraulic rescue tool systems which are intended for use by the firefighting and rescue services, principally for cutting through, spreading or pushing apart the structural parts of road vehicles, ships, trains, aircraft and building structures involved in accidents. They consist of a separate power pack, the tool[s] and the necessary interconnections and intended accessories, as defined in Clause 3 – Terms and definitions.

This document deals with all significant hazards, hazardous situations or hazardous events relevant to the machinery, when it is used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer.

NOTE 1 The aim is to assist while extracting the casualties or to create a working space for paramedical services taking the local conditions into account.

It is **not** applicable to additional requirements for:

- a) operation in severe conditions (e.g. extreme environmental conditions such as: temperatures outside the range  $-20\text{ }^{\circ}\text{C}$  up to  $+55\text{ }^{\circ}\text{C}$ , corrosive environment, tropical environment, contaminating environments, strong magnetic fields, potentially explosive atmospheres);
- b) the risk directly arising from the means provided for the portability, transportability and mobility of double-acting hydraulic rescue tools during periods of their operation.

NOTE 2 For the EU/EEA other Directives can be applicable to the equipment in the scope, for example the Electro Magnetic Compatibility Directive.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50565-2:2014, *Electric cables - Guide to use for cables with a rated voltage not exceeding 450/750 V (U0/U) - Part 2: Specific guidance related to EN 50525 cable types*

EN 659, *Protective gloves for firefighters*

EN 837-1, *Pressure gauges - Part 1: Bourdon tube pressure gauges - Dimensions, metrology, requirements and testing*

EN 853, *Rubber hoses and hose assemblies - Wire braid reinforced hydraulic type - Specification*

EN 854, *Rubber hoses and hose assemblies - Textile reinforced hydraulic type - Specification*

EN 856, *Rubber hoses and hose assemblies - Rubber-covered spiral wire reinforced hydraulic type - Specification*

EN 857, *Rubber hoses and hose assemblies - Wire braid reinforced compact type for hydraulic applications - Specification*

EN 10025-1:2004, *Hot rolled products of structural steels - Part 1: General technical delivery conditions*

EN 10025-2:2004, *Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels*

EN 10210-2, *Hot finished structural hollow sections of non-alloy and fine grain steels - Part 2: Tolerances, dimensions and sectional properties*

EN 60204-1, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements*

EN 60529, *Degrees of protection provided by enclosures (IP Code)(IEC 60529)*

EN ISO 3949, *Plastics hoses and hose assemblies - Textile-reinforced types for hydraulic applications - Specification (ISO 3949)*

EN ISO 4413, *Hydraulic fluid power - General rules and safety requirements for systems and their components (ISO 4413)*

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

EN ISO 1402, *Rubber and plastics hoses and hose assemblies - Hydrostatic testing (ISO 1402)*

EN ISO 10619-1, *Rubber and plastics hoses and tubing - Measurement of flexibility and stiffness - Part 1: Bending tests at ambient temperature (ISO 10619-1)*

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

EN ISO 7751:1997<sup>1</sup>, *Rubber and plastics hoses and hose assemblies — Ratios of proof and burst pressure to maximum working pressure - Amendment 1 — Replacement of “design working pressure” by “maximum working pressure” throughout text (ISO 7751:1991)*

EN ISO 11201, *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)*

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

EN ISO 13732-1, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces*

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

ISO/TR 14121-2, *Safety of machinery — Risk assessment — Part 2: Practical guidance and examples of methods*

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<sup>1</sup> As impacted by EN ISO 7751:1997/A1:2011.