

Aerospace series - Rotorcraft Emergency Breathing
Systems (EBS) - Requirements, testing and marking



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Aerospace series - Rotorcraft Emergency Breathing Systems (EBS) - Requirements, testing and marking

Série aéronautique - Systèmes de ventilation d'urgence
(EBS) de hélicoptère - Exigences, essais et marquage

Luft- und Raumfahrt - Drehflügler
Notfallbeatmungssystem (EBS) - Anforderungen,
Prüfung und Kennzeichnung

This European Standard was approved by CEN on 18 December 2022.

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

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European foreword

This document (EN 4856:2023) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

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of an identical text or by endorsement, at the latest by August 2023, and conflicting national standards shall be withdrawn at the latest by August 2023.

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 4856:2018.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

This document prescribes the minimum standards of design and performance for rotorcraft emergency breathing systems (EBS), used to reduce the risks of drowning in the event of submersion. An EBS is a form of personal protective equipment that provides the user with a means to breathe underwater, thereby improving the probability of successfully escaping from a submerged rotorcraft cabin. If used correctly, EBS should mitigate the risk of drowning.

This document aims to ensure that the equipment user is able to carry out the necessary emergency procedures whilst being provided with an appropriate level of protection under foreseeable conditions of use. It also aims to ensure that the equipment presents a minimal hazard in relation to escape from the rotorcraft, and that the equipment has no detrimental effect on the health and safety of the user or on the performance of other equipment.

This document is applicable to all rotorcraft. Rotorcraft include helicopters, tilt rotor/wing and gyroplanes. For the purpose of this document the term helicopter is used generically hereinafter.

1 Scope

This document specifies requirements for Emergency Breathing Systems (EBS) for use by helicopter crew and passengers in the event of a ditching or water impact, to ensure minimum levels of performance. It applies to EBS capable of being successfully and reliably deployed in air and underwater, for use by adults only.

This document is applicable to compressed air and hybrid rebreather designs of EBS. It does not apply to EBS that cannot be successfully and reliably deployed underwater.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 250, *Respiratory equipment — Open-circuit self-contained compressed air diving apparatus — Requirements, testing and marking*

EN 4862, *Aerospace series — Rotorcraft constant wear lifejackets — Requirements, testing and marking*¹

EN 4863:—^{1 2}, *Aerospace series — Rotorcraft immersion suits — Requirements, testing and marking*

EN 4886, *Aerospace series — Rotorcraft life rafts — Requirements, testing and marking*³

EN 12021, *Respiratory equipment — Compressed gases for breathing apparatus*

EN 14143:2013, *Respiratory equipment — Self-contained re-breathing diving apparatus*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227)*

EN ISO 12894, *Ergonomics of the thermal environment — Medical supervision of individuals exposed to extreme hot or cold environments (ISO 12894)*

EN ISO 14116:2015, *Protective clothing — Protection against flame — Limited flame spread materials, material assemblies and clothing (ISO 14116:2015)*

EN ISO 15025:2016, *Protective clothing — Protection against flame — Method of test for limited flame spread (ISO 15025:2016)*

EASA CS-25 Amendment 26:2020, *Certification Specifications and Acceptable Means of Compliance for Large Aeroplanes CS-25, Book 1 — Appendix F*

¹ Under preparation. Current stage is: FprEN 4862:2022.

² Under preparation. Current stage is: ASD-STAN prEN 4863:2022.

³ In preparation at the date of publication of this document.