Aerospace series - ECO efficiency of catering equipment - Part 01: General conditions

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 4855-01:2025 sisaldab Euroopa standardi EN 4855-01:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 4855-01:2025 consists of the English text of the European standard EN 4855-01:2025.
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 and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 29.10.2025.	Date of Availability of the European standard is 29.10.2025.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 67.250

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 4855-01

October 2025

ICS 67.250

Supersedes EN 4855-01:2020

English Version

Aerospace series - ECO efficiency of catering equipment - Part 01: General conditions

Série aérospatiale - Écoefficacité du matériel de restauration - Partie 01 : Conditions générales

Luft- und Raumfahrt - ECO Effizienz von Cateringgeräten - Teil 01: Allgemeine Bedingungen

This European Standard was approved by CEN on 18 August 2025.

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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-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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Ref. No. EN 4855-01:2025 E

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European foreword

This document (EN 4855-01:2025) has been prepared by 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 April 2026, and conflicting national standards shall be withdrawn at the latest by April 2026.

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 4855-01:2020.

This document includes the following significant technical changes with respect to EN 4855-01:2020:

— added description, function parameters, formulas and calculation sheets for trash compactors and espresso maker equipment throughout the document;

— correction of the formula for the kerosene consumption due to the mass;

— expanded scope of chilling equipment to chilling equipment not capable to freeze;

— clarified specification of weight measurement conditions;

— corrected labelling of $m_{K,F}$ and $m_{K,B}$ to be “overall kerosene consumption”, instead of “kerosene consumption due to electrical energy”;

— added scaled kerosene consumption to all calculation sheets in 5.7;

— corrected labelling of several items on the calculation sheets.

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.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

Efficient and economic aircraft operation is one of the main objectives in the aviation industry. The main goals for a competitive and environmental friendly operation are to reduce weight, fuel consumptions and thus to lower the costs leading to a more sustainable aircraft.

Today's aviation industry standards do not provide a classification of catering equipment according to their power demand and weight. Since it is state of the art for household appliances to be rated with ECO-label categories, the purpose of this document is to standardize the test procedures and calculations to determine the ECO efficiency for catering equipment installed in the aircraft.

1 Scope

This document specifies the test procedures and calculations to determine the ECO efficiency of the following catering equipment installed in an aircraft:

— chilling equipment (with and without freeze function);

— ovens (steam and convection ovens);

— beverage makers (coffee makers, water heaters);

— trash compactors (single and double bin);

— espresso makers (grain, powder, pad and capsule based).

Based on the results it will be possible to derive the energy consumption index and a performance index of the considered equipment type. The two index values represent the ECO efficiency.

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 4855-02, *Aerospace series — ECO efficiency of catering equipment — Part 02: Oven equipment*

EN 4855-03, *Aerospace series — ECO efficiency of catering equipment — Part 03: Chilling equipment*,

EN 4855-04, *Aerospace series — ECO efficiency of catering equipment — Part 04: Beverage makers*

EN 4855-05, *Aerospace series — ECO efficiency of catering equipment — Part 05: Trash compactors*

EN 4855-06, *Aerospace series — ECO efficiency of catering equipment — Part 06: Espresso makers*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
catering equipment
equipment installed in an aircraft to provide or support food or beverage service

Note 1 to entry: Includes ovens, beverage makers, water heaters, chilling equipment, trash compactors and espresso makers.

3.2
electrical energy consumption
measured apparent power integrated over a period of time