



**SLOVENSKI STANDARD**  
**oSIST prEN IEC 60068-3-6:2024**  
**01-januar-2024**

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**Okoljsko preskušanje - 3-6. del: Podporna dokumentacija in navodilo - Potrjevanje tehničnih lastnosti toplotnih/vlažnih komor**

Environmental testing - Part 3-6: Supporting documentation and guidance - Confirmation of the performance of temperature/humidity chambers

Essais d'environnement - Partie 3-6: Documentation d'accompagnement et recommandations - Confirmation des performances des chambres d'essai en température/humidité

**Ta slovenski standard je istoveten z: prEN IEC 60068-3-6:2023**

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**ICS:**

01.110	Tehnična dokumentacija za izdelke	Technical product documentation
19.040	Preskušanje v zvezi z okoljem	Environmental testing
29.020	Elektrotehnika na splošno	Electrical engineering in general

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# 104/1022/CDV

## COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: <b>IEC 60068-3-6 ED3</b>	
DATE OF CIRCULATION: <b>2023-11-03</b>	CLOSING DATE FOR VOTING: <b>2024-01-26</b>
SUPERSEDES DOCUMENTS: <b>104/976/CD, 104/995A/CC</b>	

IEC TC 104 : ENVIRONMENTAL CONDITIONS, CLASSIFICATION AND METHODS OF TEST	
SECRETARIAT: Sweden	SECRETARY: Mr Henrik Lagerström
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY	
<input checked="" type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING <b>Attention IEC-CENELEC parallel voting</b> The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting. The CENELEC members are invited to vote through the CENELEC online voting system.	<input type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING

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TITLE:

**Environmental testing - Part 3-6: Supporting documentation and guidance - Confirmation of the performance of temperature/ humidity chambers**

PROPOSED STABILITY DATE: 2026

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## 54 INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## ENVIRONMENTAL TESTING –

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**Part 3-6: Supporting documentation and guidance –  
Confirmation of the performance of temperature/humidity chambers**

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## FOREWORD

63 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising  
64 all national electrotechnical committees (IEC National Committees). The object of IEC is to promote  
65 international co-operation on all questions concerning standardization in the electrical and electronic fields. To  
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97 International Standard IEC 60068-3-6 has been prepared by IEC technical committee 104:  
98 Environmental conditions, classification and methods of test.

99 This third edition cancels and replaces the second edition published in 2018. This edition  
100 constitutes a technical revision.

101 This edition includes the following significant technical changes with respect to the previous  
102 edition:

103 a) The contents of IEC 60068-3-5 and IEC 60068-3-6 are merged into this document due to  
104 the significant overlap between the two.

105 b) Addition of new terms and definitions for temperature and humidity uniformity.

106 c) Significant editorial re-writing for clarity.

107 d) Clarification of mandatory versus non-mandatory information.

108 e) Updates to several figures.

109 f) New information in bibliography and removal of listings from the normative references  
110 section deemed non-mandatory in new edition.

111 The text of this International Standard is based on the following documents:

FDIS	Report on voting
104/XXX/XXX	104/XXX/XXX

112  
113 Full information on the voting for the approval of this International Standard can be found in  
114 the report on voting indicated in the above table.

115 The French version of this standard has not been voted upon.

116 This document has been drafted in accordance with the ISO/IEC Directives, Part 2. Upon  
117 publication, the intention of TC104 is to withdraw IEC 60068-3-5.

118 IEC 60068-3-6 is to be read in conjunction with IEC 60068-3-11:XXXX. A list of all parts in the  
119 IEC 60068 series, published under the general title *Environmental testing*, can be found on  
120 the IEC website.

121 The committee has decided that the contents of this document will remain unchanged until the  
122 stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to  
123 the specific document. At this date, the document will be

- 124 • reconfirmed,
- 125 • withdrawn,
- 126 • replaced by a revised edition, or
- 127 • amended.

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## INTRODUCTION

131 IEC 60068 (all parts) contains fundamental information on environmental testing procedures  
132 and severities.

133 The expression "environmental conditioning" or "environmental testing" covers the natural and  
134 artificial environments to which components or equipment may be exposed so that an  
135 assessment can be made of their performance under conditions of use, transport and storage  
136 to which they may be exposed in practice.

137 Temperature and humidity chambers used for "environmental conditioning" or "environmental  
138 testing" are not described in any publication, although the method of maintaining and  
139 measuring temperature and/or humidity has a great influence on test results. The physical  
140 characteristics of temperature and humidity chambers can also influence test results.

141 The goal of this document is to provide methods for measuring the performance  
142 characteristics of temperature and humidity chambers. This process can be useful for test  
143 specifiers and chamber users, and it can provide standardized methods for chamber  
144 manufacturers to specify chamber performance.

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## ENVIRONMENTAL TESTING –

### Part 3-6: Supporting documentation and guidance – Confirmation of the performance of temperature and humidity chambers

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#### 1 Scope

156 This part of IEC 60068 provides a standardized method of establishing whether temperature  
157 as well as temperature and humidity chambers, without specimens, are able to achieve the  
158 requirements of the relevant climatic test procedures of IEC 60068-2.

159 This document is intended for users when conducting regular chamber performance  
160 monitoring.

161 Guidance on establishing variations and uncertainties of the climatic conditions within  
162 environmental test chambers are provided in IEC 60068-3-11. The guidance of that document  
163 is intended to be used with an empty climatic test chamber, a chamber containing a test load,  
164 or a chamber contain a test specimen undergoing testing. The guidance is particularly  
165 applicable when the specimen or test load is large in comparison to the chamber working  
166 space, is heat-dissipating or influences the airflow within the chamber.

167 When considering temperature only chambers, the passages in this document related to  
168 humidity do not need to be applied.

#### 2 Normative references

170 The following documents are referred to in the text in such a way that some or all of their  
171 content constitutes requirements of this document. For dated references, only the edition  
172 cited applies. For undated references, the latest edition of the referenced document (including  
173 any amendments) applies.

174 IEC 60068-1, *Environmental testing – Part 1: General and guidance*

175 IEC 60068-2 (all parts), *Environmental testing – Part 2: Tests*

176 IEC 60068-3-7, *Environmental testing – Part 3-7: Supporting documentation and guidance –*  
177 *Measurements in temperature chambers for tests A and B (with load)*

#### 3 Terms and definitions

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

180 ISO and IEC maintain terminological databases for use in standardization at the following  
181 addresses:

- 182 • IEC Electropedia: available at <http://www.electropedia.org/>
- 183 • ISO Online browsing platform: available at <http://www.iso.org/obp>

- 184 **3.1**  
185 **temperature chamber**  
186 enclosure or space in some parts of which the temperature conditions, specified in IEC  
187 60068-2 (all parts), can be achieved
- 188 **3.2**  
189 **temperature/humidity chamber**  
190 enclosure or space in some parts of which the temperature and humidity conditions specified  
191 in IEC 60068-2 (all parts) can be achieved
- 192 Note 1 to entry: All temperature/humidity chambers can be considered as temperature chambers when humidity  
193 conditions are not specified.  
194
- 195 **3.3**  
196 **absolute humidity**  
197 mass of water vapour present in a unit volume of moist air
- 198 Note 1 to entry: Typical units of measure are g/m<sup>3</sup>.  
199 Note 2 to entry: Unless otherwise specified, "humidity" is relative humidity (RH).  
200
- 201 **3.4**  
202 **dewpoint**  
203  $T_d$   
204 temperature at which the saturation vapour pressure over water is equal to the partial  
205 pressure of the water vapour in the air
- 206 **3.5**  
207 **saturation vapour pressure**  
208 maximum possible pressure exerted by a water vapour in equilibrium with its solid or liquid  
209 phase, such that any increase will initiate within the vapour a change to a more condensed  
210 state
- 211 **3.6**  
212 **partial vapour pressure**  
213 contribution of water vapour in a given volume of air at a constant pressure and temperature  
214 of the atmosphere
- 215 **3.7**  
216 **relative humidity**  
217 **RH**  
218 ratio of the partial vapour pressure, divided by the saturation vapour pressure of a given  
219 volume of air at a constant temperature, expressed as percentage
- 220 Note 1 to entry: The most popular method to express the water vapour content in air is relative humidity.  
221 Note 2 to entry: Unless otherwise specified, "humidity" is relative humidity (RH).
- 222 **3.8**  
223 **climatogram**  
224 graphical display of combined temperature and relative humidity conditions  
225 Note 1 to entry: These are sometimes used to define the achievable operating parameters of a chamber.
- 226 **3.9**  
227 **temperature setpoint**  
228 desired temperature as set by the chamber controls
- 229 **3.10**  
230 **achieved temperature**  
231 temperature at the centre of the working space when the chamber has reached temperature  
232 stabilization