
**Railway applications — Heating,
ventilation and air conditioning
systems for rolling stock —**

**Part 1:
Terms and definitions**

*Applications ferroviaires — Systèmes de chauffage, ventilation et
climatisation pour le matériel roulant —*

Partie 1: Termes et définitions

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 269, *Railway applications*, Subcommittee SC 2, *Rolling stock*.

A list of all parts in the ISO 19659 series can be found on the ISO website.

Introduction

The ISO 19659 series defines terms, thermal comfort, energy efficiency and system installation of heating, ventilation and air conditioning (HVAC) for rolling stock.

The purpose of this document is to standardize the terms, definitions, symbols and abbreviated terms used throughout trains systems for the cooling, heating and internal air circulation that are commonly known as heating, ventilation and air conditioning (HVAC). These can be broken down into multiples of these functions and as an example, ventilation and air conditioning (VAC), etc.

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Railway applications — Heating, ventilation and air conditioning systems for rolling stock —

Part 1: Terms and definitions

1 Scope

This document is applicable to rail vehicles and specifies the terms, definitions, symbols and abbreviated terms to be used in the ISO 19659 series, heating, ventilation and air conditioning for rolling stock.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

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

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

3.1 HVAC system

3.1.1 Function

3.1.1.1 cooling

process which enables the interior temperature to be lowered or maintained

3.1.1.2 pre-cooling

process which enables the interior temperature to be lowered (without the presence of passengers)

3.1.1.3 dehumidification

process which removes water vapour from air to reduce the absolute humidity

[SOURCE: ISO/TR 16344:2012, 2.1.32, modified — “relative humidity” has been changed to “absolute humidity”.]

3.1.1.4 heating

process which enables the interior temperature to be raised or maintained

3.1.1.5 pre-heating

process which enables the interior temperature to be raised (without the presence of passengers)