
Čiščenje zraka in drugih plinov - Terminologija (ISO 29464:2024)

Cleaning of air and other gases - Vocabulary (ISO 29464:2024)

Reinigung von Luft und anderen Gasen - Terminologie (ISO 29464:2024)

Épuration de l'air et autres gaz - Terminologie (ISO 29464:2024)

Ta slovenski standard je istoveten z: EN ISO 29464:2024**ICS:**

01.040.13	Okolje. Varovanje zdravja. Varnost (Slovarji)	Environment. Health protection. Safety (Vocabularies)
13.040.99	Drugi standardi v zvezi s kakovostjo zraka	Other standards related to air quality
23.120	Zračniki. Vetrniki. Klimatske naprave	Ventilators. Fans. Air-conditioners

SIST EN ISO 29464:2024**en,fr,de**

EUROPEAN STANDARD

EN ISO 29464

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2024

ICS 01.040.91; 91.140.30

Supersedes EN ISO 29464:2019

English Version

Cleaning of air and other gases - Vocabulary (ISO 29464:2024)

Épuration de l'air et autres gaz - Vocabulaire (ISO 29464:2024)

Reinigung von Luft und anderen Gasen - Terminologie (ISO 29464:2024)

This European Standard was approved by CEN on 15 June 2024.

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, 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 United Kingdom.

[SIST EN ISO 29464:2024](https://standards.iteh.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024)

<https://standards.iteh.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024>



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	3

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[SIST EN ISO 29464:2024](https://standards.itih.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024)

<https://standards.itih.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024>

European foreword

This document (EN ISO 29464:2024) has been prepared by Technical Committee ISO/TC 142 "Cleaning equipment for air and other gases" in collaboration with Technical Committee CEN/TC 195 "Cleaning equipment for air and other gases" the secretariat of which is held by UNI.

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 January 2025, and conflicting national standards shall be withdrawn at the latest by January 2025.

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 ISO 29464:2019.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. 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.

(<https://standards.iteh.ai>)
Document Preview

Endorsement notice

The text of ISO 29464:2024 has been approved by CEN as EN ISO 29464:2024 without any modification.

[SIST EN ISO 29464:2024](https://standards.iteh.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024)

<https://standards.iteh.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024>



**International
Standard**

ISO 29464

**Cleaning of air and other gases —
Vocabulary**

Épuration de l'air et autres gaz — Vocabulaire

**Third edition
2024-07**

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[SIST EN ISO 29464:2024](https://standards.itih.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024)

<https://standards.itih.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024>

ISO 29464:2024(en)

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN ISO 29464:2024](https://standards.iteh.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024)

<https://standards.iteh.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

ISO 29464:2024(en)**Contents**

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 Terms related to particle and gas-phase air cleaners.....	1
3.2 Terms related to particulate matter filters (including general ventilation, EPA, HEPA and ULPA filters).....	6
3.3 Terms related to air intake particle filters for rotary machines.....	20
3.4 Terms related to cleanable particle filter degradation.....	21
3.5 Terms related to gas phase air cleaners (GPAC).....	23
3.6 Terms related to UVC devices.....	30
3.7 Terms related to stand-alone electrically-powered air cleaners.....	33
Bibliography	35
Index	37

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN ISO 29464:2024](https://standards.iteh.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024)

<https://standards.iteh.ai/catalog/standards/sist/a756c84e-f2ef-47bc-ac21-5d2562e016ad/sist-en-iso-29464-2024>

ISO 29464:2024(en)

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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

For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 142, *Cleaning equipment for air and other gases*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 195, *Cleaning equipment for air and other gases*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 29464:2017), which has been technically revised.

The main changes are as follows:

- addition of [3.7](#) covering stand-alone electrically-powered air cleaners;
- addition of new terms and definitions in [3.5](#) and [3.6](#) due to the publication of new standards.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Cleaning of air and other gases — Vocabulary

1 Scope

This document defines terms related to the air filtration industry.

This document is applicable to particulate matter and gas phase air filters and air cleaners used for the general ventilation of inhabited enclosed spaces. It is also applicable to air inlet filters for static or seaborne rotary machines, cleanable filters, UV-C germicidal devices, and stand-alone electrically-powered air cleaners.

It is not applicable to cabin filters for road vehicles or air inlet filters for mobile internal combustion engines for which separate arrangements exist. Dust separators for the purpose of air pollution control are also excluded.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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 Terms related to particle and gas-phase air cleaners

3.1.1

air cleaner

device for removing *contaminants* (3.1.12) from air in a ventilation system, building or other enclosed space

3.1.2

robotic air cleaner

air cleaner that operates and changes its physical location autonomously without user intervention

Note 1 to entry: The robotic air cleaner can consist of a part that houses the air cleaning function and can have a docking station and/or other accessories to assist its operation.

3.1.3

fresh-air air cleaner

air cleaner connected to the external environment, which provides pollutant-reduced outdoor air into an indoor space

Note 1 to entry: The fresh-air air cleaner can also include other auxiliary functions, such as heat exchange.

3.1.4

air velocity

rate of air movement

Note 1 to entry: It is expressed in m/s (fpm).

ISO 29464:2024(en)**3.1.5****bypass**

proportion of the *challenge air stream* (3.5.14) that passes around or through an *air cleaner* (3.1.1) without interacting with the air cleaner

3.1.6**calibrate**

to compare readings from the instrument to be calibrated with those from a reference device

3.1.7**capture**

removal of contaminants from an air stream

3.1.8**classification**

allocation of air cleaners into groups and classes according to relevant aspects of their air cleaning performance

3.1.9**clean side**

downstream side of an air cleaner element

3.1.10**combination product**

air cleaner that includes a secondary function besides air cleaning within the same housing, such as humidifying, dehumidifying, heating, or air conditioning

3.1.11**concentration**

quantity of one substance dispersed in a defined amount of another

3.1.12**contaminant****pollutant**

substance (solid, liquid or gas) that negatively affects the intended use of a gas

3.1.13**contamination****pollution**

presence of a substance that negatively affects the intended use of a gas

3.1.14**decontamination factor**

ratio of the *contaminant* (3.1.12) concentration or particle number upstream of an air cleaner to the *contaminant concentration* (3.1.11) or particle number downstream of the air cleaner

Note 1 to entry: The decontamination factor can also be expressed as $1/(1 - \text{overall efficiency})$ or as $1/\text{penetration}$.

3.1.15**dirty side**

upstream side of an air cleaner element

3.1.16**downstream**

area or region into which air flows on leaving an air cleaner

3.1.17**removal efficiency**

fraction or percentage of a challenge *contaminant* (3.1.12) that is removed by an air cleaner

ISO 29464:2024(en)

3.1.18**average removal efficiency**

value of removal efficiency which results from averaging the removal efficiencies determined over a number of discrete time intervals up to the end of an efficiency test

3.1.19**effluent**

gas or liquid discharged from a given source into the external environment

Note 1 to entry: This is a general term describing any gas or liquid discharged from a given source; in this context, the discharged liquid or gas may contain associated gaseous, liquid and/or particulate *contaminants* (3.1.12).

3.1.20**face velocity**

volumetric air flow rate divided by the *nominal air cleaner face area* (3.1.23)

Note 1 to entry: air cleaner face velocity is expressed in m/s (fpm).

3.1.21**filter****air filter**

device for separating solid or liquid particles or gaseous *contaminant* (3.1.12) from an air stream passing through the device

Note 1 to entry: The device is generally formed of a layer or layers of porous, fibrous or granular material.

Note 2 to entry: Air being cleaned by a filter shall pass through the filter, whereas an *air cleaner* (3.1.1) can reduce air *contamination* (3.1.13) by any method.

3.1.22**filter face area****air cleaner face area**

cross-sectional face area of the air cleaner through which air flows into the device

3.1.23**nominal filter face area****nominal air cleaner face area**

cross-sectional face area of the air cleaner through which air flows into the device calculated using dimensions rounded up to the nearest integer

3.1.24**filter insert**

replaceable part of a filter which contains the filter medium but which can only operate mounted inside a frame

3.1.25**filter medium**

material used for separating contaminants from air and characterized by its porous structure

3.1.26**filter medium area**

area of *filter medium* (3.1.25) contained in the filter

Note 1 to entry: For filters with pleats or folds, the filter medium area can be much larger than the *filter face area* (3.1.22).

3.1.27**effective filter medium area**

area of the *filter medium* (3.1.25) contained in the filter through which air passes during operation

Note 1 to entry: This excludes areas covered by sealant, spacers, struts, etc.

Note 2 to entry: Effective filter medium area is expressed in m² (ft²).

ISO 29464:2024(en)

3.1.28**medium velocity**

volumetric air flow rate divided by the *effective filter medium area* (3.1.27) of the *filter* (3.1.21)

Note 1 to entry: Filter medium velocity is expressed in m/s (fpm).

Note 2 to entry: In devices where the filter medium surface area has been increased by use of pleats, folds or bags, the filter medium velocity may be much less than the filter *face velocity* (3.1.20).

3.1.29**flow rate****air flow rate**

volume of air flowing through an air cleaner per unit time

3.1.30**design flow rate****design air flow rate**

air flow rate specified by the manufacturer

3.1.31**user nominal air volume flow rate**

volume air flow rate specified by the user, at which an air cleaner is used or tested in situ

Note 1 to entry: This flow rate may be different from the one specified by the manufacturer.

3.1.32**test flow rate**

rate of air flow used for testing

Note 1 to entry: The flow rate is usually expressed in volumetric units [m³/h (cfm)].

Note 2 to entry: Test flow rate may differ from the manufacturer's specified flow through the air cleaner.

3.1.33**rated flow**

flow rate through an air cleaner, either as stated by the manufacturer for defined conditions of use or as agreed between the interested parties for a particular installation[†]

Note 1 to entry: The manufacturer's rated flow may differ from the *test air flow rate* (3.1.32).

3.1.34**gas**

substance whose vapour pressure is greater than the *ambient pressure* (3.5.53) at ambient temperature

3.1.35**header frame**

integral rigid frame of an air cleaner with a flange extending beyond the dimensions of the frame walls, enabling it to be fastened and sealed against the *holding frame* (3.1.36)

3.1.36**holding frame**

rigid structural frame, part of an air handling system into which an air cleaner is fastened and sealed

3.1.37**housing**

device used to hold an air cleaner

3.1.38**hood**

inlet device for an air extraction system