INTERNATIONAL STANDARD

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Fans — Efficiency classification for fans —

Part 3: Fans without drives at maximum operating speed

Ventilateurs — Classification du rendement des ventilateurs —

Partie 3: Ventilateurs non entraînés à vitesse maximale de fonctionnement

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Foreword

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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 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 117, *Fans*.

This first edition cancels and replaces ISO 12759:2010, which has been technically revised. It also incorporates the Amendment ISO 12759:2010/Amd.1:2013.

A list of all parts in the ISO 12759 series can be found on the ISO website.

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.

Introduction

The last decade has seen both an escalation in the price and an increasing recognition of the finite life of many of the fossil fuels currently used. There is also a belief by many that climatic change is due to increasing levels of carbon dioxide in the atmosphere. This has led to many nations reviewing methods of energy generation and usage.

To maintain economic growth there is therefore a need to promote energy efficiency. This requires better selection of equipment by users and thus better design of this equipment by its manufacturers.

Fans of all types are used for ventilation and air conditioning, for process engineering (drying, pneumatic conveying and combustion air supply) and for agriculture. Indeed, energy usage by fans has been calculated to be nearly 20 % of total worldwide energy usage.

The fan industry is of a global nature, with a considerable degree of exporting and licensing. To ensure that the defining fan performance characteristics are common throughout the world a series of standards have been developed. It is the belief of the industry that there is now a need for minimum efficiency standards to be recognized. To encourage their implementation, a classification system is proposed which incorporates a series of efficiency bands. With improvements in technology and manufacturing processes, the minimum efficiency levels can be reviewed and increased in time.

There have been comments concerning the long-standing definition of wide bands used in this document so that, for example, a fan measured as having an efficiency of 68 % is classified as belonging to class FEG71. In other parts of the ISO 12759 series fans are classified as belonging to a certain class only if the measured value is equal to or greater than the class number.

Work is being undertaken to reach a more common approach between the various parts of the ISO 12759 series, for example by renaming the classes or by introducing narrower classes, so that a fan measured with an efficiency of 68 % is said to belong to class FEG68.