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**Industrial fans — Vocabulary and  
definitions of categories**

*Ventilateurs industriels — Vocabulaire et définitions des catégories*



## 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 13349 was prepared by Technical Committee ISO/TC 117, *Industrial fans*.

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## Introduction

This International Standard reflects the importance of a standardized approach to the terminology of fans.

The need for an International Standard has been evident for some considerable time. To take just one example, the coding of driving arrangements differs from manufacturer to manufacturer. What one currently calls Arrangement 1 may be known by another as Arrangement 3. The confusion for the customer is only too apparent. For similar reasons, it is essential to use standardized nomenclature to identify particular parts of a fan.

Wherever possible, in the interests of international comprehension, this International Standard is in agreement with similar documents produced by Eurovent, AMCA, VDMA (Germany), AFNOR (France) and UNI (Italy). They have, however, been built on where the need for amplification was apparent.

Use of this International Standard will lead to greater understanding among all parts of the air-moving industry. It is hoped that manufacturers, consultants, contractors and users will adopt and refer to this International Standard as soon as possible.



# Industrial fans — Vocabulary and definitions of categories

## 1 Scope

This International Standard provides a vocabulary and defines categories for general purpose industrial fans and their component parts. It is applicable to any fan used for industrial purposes, including the ventilation of buildings and mines, but excluding ceiling, pedestal and similar circulation types of fans such as those commonly used for non-industrial purposes.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5801:1997, *Industrial fans — Performance testing using standardized airways*.

ISO 5802:—<sup>1)</sup>, *Industrial fans — Performance testing in situ*.

ISO 13350:1999, *Industrial fans — Performance testing of jet fans*.

ISO 13351:1996, *Industrial fans — Dimensions*.

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

### 3.1

#### **fan**

rotary-bladed machine which receives mechanical energy and utilizes it by means of one or more impellers fitted with blades to maintain a continuous flow of air or other gas passing through it and whose work per unit mass does not normally exceed 25 kJ/kg

NOTE 1 The term "fan" is taken to mean the fan as supplied without any addition to the inlet or outlet, except where such addition is specified.

NOTE 2 Fans are defined according to their installation category, function, fluid path and operating conditions.

NOTE 3 If the work per unit mass exceeds a value of 25 kJ/kg, the machine is termed a turbocompressor. This means that, for a mean stagnation density through the fan of 1,2 kg/m<sup>3</sup>, the fan pressure will not exceed 1,2 × 25 kJ/kg, i.e. 30 kPa, and the pressure ratio will not exceed 1,30 since atmospheric pressure is approximately 100 kPa.

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<sup>1)</sup> To be published.