



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 13351:2023**  
**01-december-2023**

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**Industrijski ventilatorji - Mere (ISO/DIS 13351:2023)**

Fans - Dimensions (ISO/DIS 13351:2023)

Ventilatoren - Abmessungen (ISO/DIS 13351:2023)

Ventilateurs - Dimensions (ISO/DIS 13351:2023)

**Ta slovenski standard je istoveten z: prEN ISO 13351**

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**ICS:**

<https://standards.iteh.ai/> 23.120 Zračniki. Vetrniki. Klimatske naprave Ventilators. Fans. Air-conditioners  
oSIST prEN ISO 13351:2023  
29513/osist-pren-iso-13351-2023

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**en,fr,de**



# DRAFT INTERNATIONAL STANDARD

## ISO/DIS 13351

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## Fans — Dimensions

*Ventilateurs — Dimensions*

ICS: 23.120

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## ISO/DIS 13351:2023(E)

### 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 13351 was prepared by Technical Committee ISO/TC 117, *Fans*.

This third edition cancels and replaces the second edition (ISO 13351:2009), of which it constitutes a minor revision.

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## Introduction

This International Standard gives dimensional details of circular and rectangular flanges of fans in addition to specifying the fan size designation. For circular flanges, the values specified in ISO 6580 have been retained for light-duty fans, in parallel with those values given in [Tables 3](#) and [4](#) for medium- and heavy-duty fans.

While it does not constrain the manufacturer's choice of flange details, this International Standard facilitates interchangeability, thereby helping to reduce technical barriers to trade.

Throughout this International Standard, the principal dimensions are based on the rounded values of preferred numbers given in ISO 497.

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# Fans — Dimensions

## 1 Scope

This International Standard specifies the dimensions of the circular and rectangular flanges of general-purpose fans, as well as the fan size designations. It is not applicable to cross-flow fans or to fan appliances used for individual household or similar applications.

For circular flanges, it provides for three different flange series: one for light-duty casing thicknesses, another for medium-duty fans and the third for heavy-duty fans as used on sea-going vessels or in heavy industry.

In order not to restrict fan design unduly, only the pitch diameter, hole numbers and hole diameters are specified. Flange thickness, as well as internal and external flange diameters, may be chosen freely within the limits of good engineering practice.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3, *Preferred numbers — Series of preferred numbers*

ISO 273, *Fasteners — Clearance holes for bolts and screws*

ISO 7089, *Plain washers — Normal series — Product grade A*

ISO 13349-1, *Fans — Vocabulary and definitions of categories — Part 1: Vocabulary*

ISO 13349-2, *Fans — Vocabulary and definitions of categories — Part 2: Categories*

## 3 Terms, definitions and symbols

For the purposes of this document, the terms and definitions given in ISO 13349 and the following terms, definitions and symbols apply.

### 3.1

#### **light-duty fan**

fan suitable for air that is non-toxic, not saturated, non-corrosive, non-flammable, free from abrasive particles, and not exceeding a temperature of 80 °C, or 40 °C if the motor or the fan bearings are in the air stream, and for pressures up to 2 kPa

Note 1 to entry: Note1 to entry: See [Table 1](#).

### 3.2

#### **medium-duty fan**

fan with flange dimensions as specified in [Figure 4](#) and [Table 2](#) and suitable for pressures up to 10 kPa

### 3.3

#### **heavy-duty fan**

fan with larger flange dimensions as specified in [Figure 4](#) and [Table 3](#) and suitable for pressures up to 40 kPa

## ISO/DIS 13351:2023(E)

### 3.4 nominal impeller tip diameter

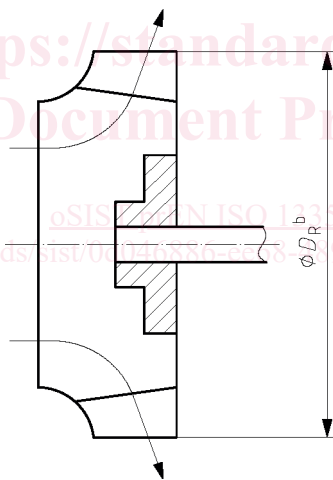
$D$

diameter of the impeller tip on which the design of the fan is based

Note 1 to entry: Note 1 to entry: See [Figures 1](#) to [3](#).

Symbol	Parameter	Unit
$D$	nominal impeller tip diameter	mm
$D_R$	impeller tip diameter <sup>a</sup>	mm (see <a href="#">Figures 1</a> to <a href="#">3</a> )
$d_0$	internal duct diameter	mm
$d_1$	pitch circle diameter	mm
$d_2$	hole diameter	mm
$d_3$	bolt diameter	mm
$d_4$	washer diameter	mm
$e$	casing thickness	mm
$g$	hole offset	mm
$l$	arc length between bolt holes	mm
$N$	number of holes	
$P$	pitch	mm
$\alpha$	angle between bolt holes	degrees
<sup>a</sup> Reference 3.7.4 of ISO 13349-1, i.e. maximum diameter measured over the tips of the blades of the impeller.		

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<sup>b</sup>  $D$  may be smaller than, larger than or equal to  $D_R$ .

**Figure 1 — Impeller — Centrifugal fan**