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# INTERNATIONAL STANDARD

# ISO 7113

Second edition  
1991-11-15

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## Forestry machinery — Portable brush-saws — Saw blades

*Matériel forestier — Débroussailleuses portatives — Lames de scies*

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Reference number  
ISO 7113:1991(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.

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 7113 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 17, *Manually portable forest machinery*.

This second edition cancels and replaces the first edition (ISO 7113:1982), of which clause 4 has been extended, clauses 5 to 9 are new, and the previous requirement on peripheral speed has been deleted.

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## Forestry machinery — Portable brush-saws — Saw blades

### 1 Scope

This International Standard specifies the basic dimensions, tolerances, requirements for material, transferable torque and marking of steel cutting blades for portable hand-held combustion engine brush-saws used for cutting small trees and seedlings (spacing) as well as for cutting bushes, weeds and heavy grass to free the seedlings.

Clause 4 applies only to circular saw blades.

### 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encour-

aged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7438:1985, *Metallic materials — Bend test*.

### 3 Definition

For the purposes of this International Standard, the following definition applies.

**3.1 saw blade:** Metal disc with peripheral cutting teeth. [ISO 7112:1982, definition 8.1]

### 4 Dimensions and tolerances

These dimensions apply only to circular saw blades. Dimensions and tolerances shall be in accordance with figure 1 and table 1.

Dimensions in millimetres

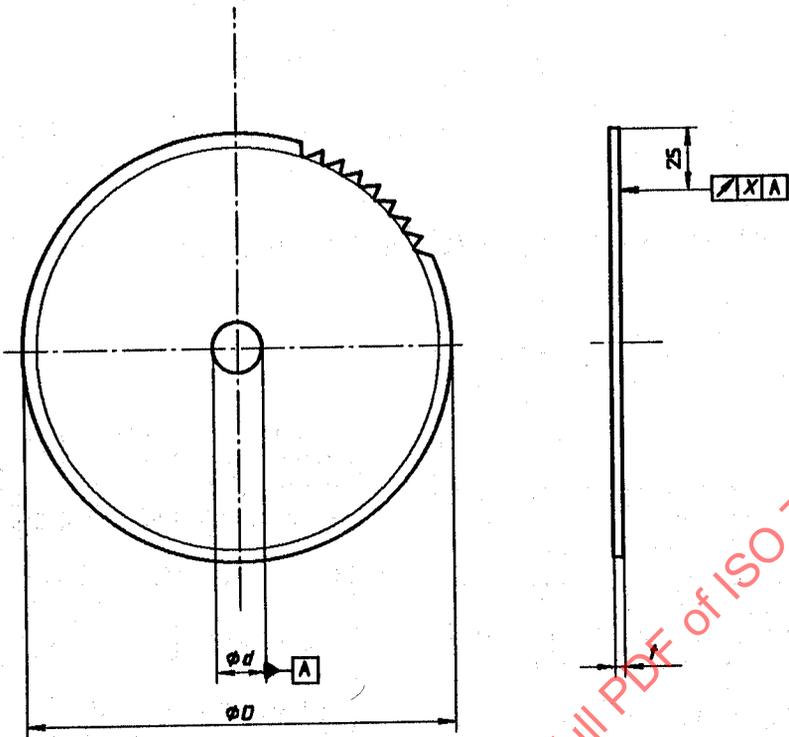


Figure 1 — Dimensions

Table 1

Dimensions in millimetres

Blade diameter $D$ $\begin{matrix} +5 \\ 0 \end{matrix}$	Blade thickness $t$ min.	Centrehole diameter $d$ $\begin{matrix} +0,15 \\ 0 \end{matrix}$	Run-out tolerance $X$
175	1,4	20	0,45
200	1,5	20	0,5
225	1,75	20	0,55
250	2	20	0,6
300	2,25	20	0,75

The verification of run-out  $X$  (total indicator reading) shall be in accordance with figure 2.

## 5 Surface quality

The blade shall be free from cracks and from surface imperfections deeper than 0,03 mm.

## 6 Material

### 6.1 Requirement

The material shall not have any cracks visible to the naked eye after being submitted to the bend test in 6.2.

### 6.2 Bend test

#### 6.2.1 Preparation of specimen

Cut a specimen of the blade so that the length is perpendicular to the grain of the material. The specimen shall have a width of 35 mm and a length of at least 35 mm.

If the grain is not visible, cut three specimens in radial directions with 60° difference.

The material shall be unlubricated.

#### 6.2.2 Test method

Carry out the test in accordance with ISO 7438 in a V-block as shown in figure 3, at a rate of 1 mm/s to 10 mm/s.

## 7 Blade retention torque

### 7.1 Requirement

No relative motion between the blade and retainer shall be allowed when a test according to 7.2 is carried out.

### 7.2 Test method

Install the blade according to the manufacturer's instructions.

Lock the blade drive-shaft.

Apply a rotational moment of force,  $M$ , in newton metres, to the blade:

$$M = 0,4 \times V \times k$$

where

$V$  is the engine displacement, in cubic centimetres;

$k$  is the gear ratio (engine/blade rotational frequency).

The moment shall be applied first five times in the normal direction of rotation, then five times in the opposite direction.

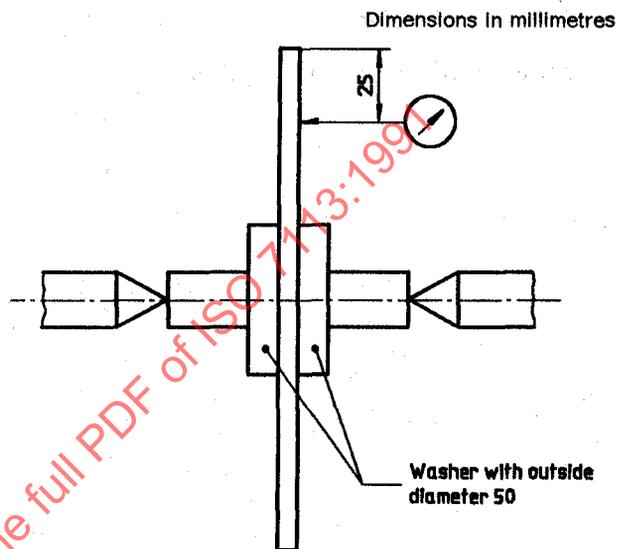


Figure 2 — Verification of run-out  $X$

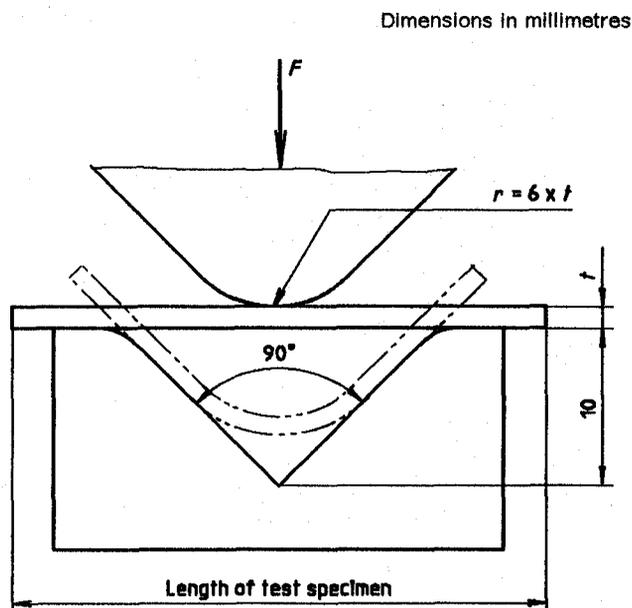


Figure 3 — Bend test

## 8 Marking

The blade shall be durably marked with:

- a) maximum allowed rotational frequency, in revolutions per minute, as determined by the manufacturer;
- b) rotational direction (when applicable);
- c) name or trade-mark of the manufacturer;
- d) code for the manufacturing date.

## 9 Designation

Blades for portable brush-saws according to this International Standard shall be designated by:

- a) "blade";
- b) reference to this International Standard;
- c) blade diameter in millimetres.

EXAMPLE

**Blade ISO 7113 - 175**

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