

INTERNATIONAL  
STANDARD

ISO  
7113

Third edition  
1999-03-01

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**Portable hand-held forestry machines —  
Cutting attachments for brush cutters —  
Single-piece metal blades**

*Machines forestières portatives — Accessoires de coupe  
des débroussailleuses — Lames métalliques monobloc*

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Reference number  
ISO 7113:1999(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 third edition cancels and replaces the second edition (ISO 7113:1991), of which it constitutes a technical revision. It extends the field of application to all single-piece metal blades for brush cutters, including circular saw blades. The requirement for the blade retention torque has been deleted; it will be dealt with instead in the machine safety standard for brush cutters and grass trimmers.

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International Organization for Standardization  
Case postale 56 • CH-1211 Genève 20 • Switzerland  
Internet iso@iso.ch

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# Portable hand-held forestry machines — Cutting attachments for brush cutters — Single-piece metal blades

## 1 Scope

This International Standard specifies the requirements for the material and marking of single-piece metal blades for portable hand-held brush cutters as well as the basic dimensions and tolerances for saw blades for portable hand-held brush saws.

## 2 Normative reference

The following standard contains provision 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 encouraged 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 7112:—<sup>1)</sup>, *Machinery for forestry — Portable hand-held brush-cutters and grass-trimmers — Vocabulary.*

## 3 Definitions

For the purposes of this International Standard, the definitions given in ISO 7112 apply.

## 4 Blade surface quality

Except for the marking, the blade shall be free from surface imperfections deeper than 0,03 mm.

## 5 Blade material

### 5.1 Requirement

The material shall not have any cracks visible to the naked eye after being submitted to the bend test in 5.2.

### 5.2 Bend test

#### 5.2.1 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  $(35 \pm 5)$  mm and the length shall be at least 10 mm longer than  $2H$  (see figure 1). If the grain is not visible, cut three specimens in radial directions with  $60^\circ$  difference.

<sup>1)</sup> To be published. (Revision of ISO 7112:1982)

The material shall be unlubricated.

Carry out the test in a V-block and using a device to bend the specimen, as shown in figure 1. The width of the V-block and the device shall be at least 40 mm.

The ambient temperature shall be 10 °C to 35 °C and the load shall be applied at a rate of 1 mm/s to 10 mm/s.

## 6 Dimensions and tolerances of saw blades

These dimensions apply only to saw blades. Dimensions and tolerances shall be in accordance with figure 2 and table 1.

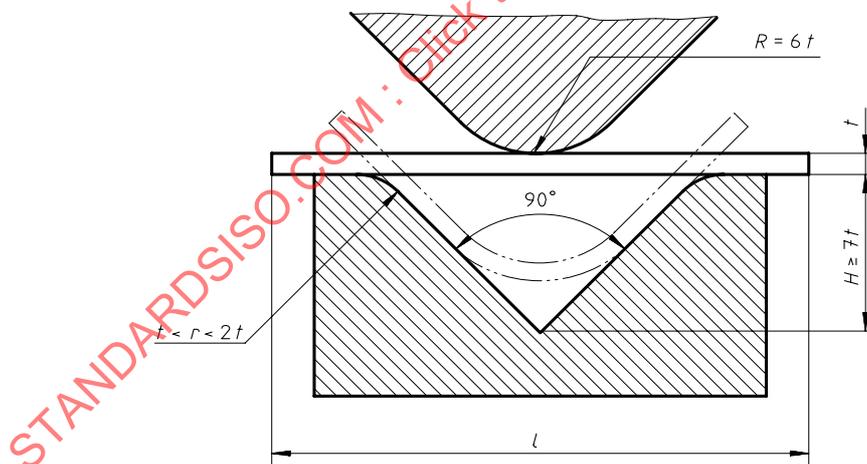
The verification of run-out  $X$  (total indicator reading) shall be in accordance with figure 3 and table 1.

## 7 Marking

The blade shall be durably marked with at least:

- the maximum allowed rotational frequency, in revolutions per minute, as determined by the manufacturer,
- the rotational direction (when applicable),
- the name or trade-mark of the manufacturer.

Dimensions in millimetres

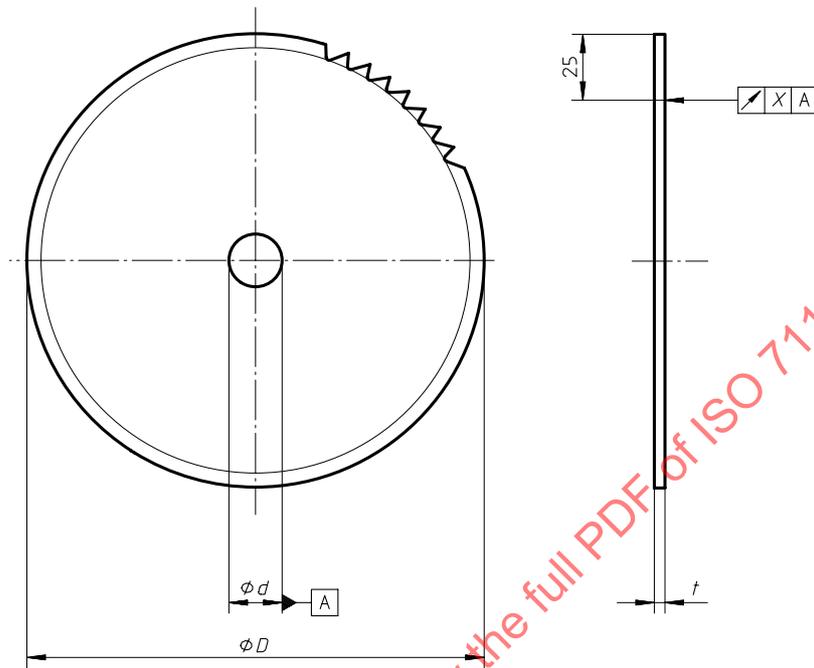


### Key

- $l$  Length of test specimen  
 $t$  Thickness of test specimen

Figure 1 — V-block for the bend test

Dimensions in millimetres



**Key**

*t* Thickness of test specimen

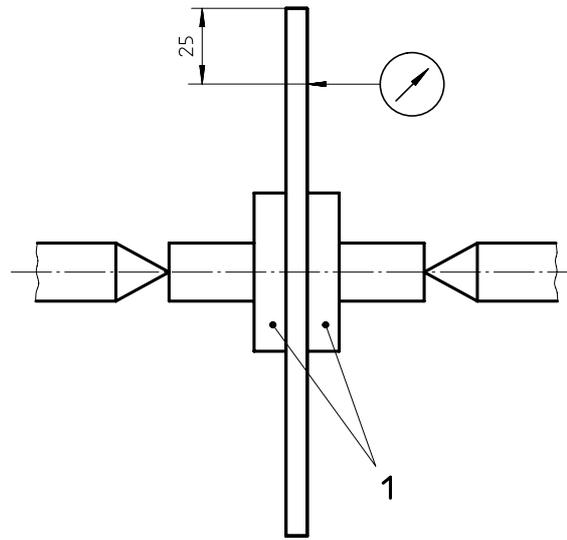
**Figure 2 — Saw blade dimensions**

**Table 1 — Dimensions for saw blades**

Dimensions in millimetres

Blade diameter	Blade thickness	Centrehole diameter	Run-out tolerance
<i>D</i>	<i>t</i>	<i>d</i>	<i>X</i>
+5 0	min.	+0,15 0	
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

Dimensions in millimetres



**Key**

- 1 Washer with outside diameter 50 mm

**Figure 3 — Verification of run-out  $X$**

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