

INTERNATIONAL  
STANDARD

**ISO**  
**8380**

Second edition  
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**Forestry machinery — Portable  
brush-cutters and grass-trimmers —  
Cutting attachment guard strength**

*Matériel forestier — Débroussailleuses et coupe-herbe portatifs —  
Résistance mécanique du protecteur du dispositif de coupe*



Reference number  
ISO 8380:1993(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 8380 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Sub-Committee SC 17, *Manually portable forest machinery*.

This second edition cancels and replaces the first edition (ISO 8380:1985), which has been extended to include guards for types of blade other than circular and cutting attachment guards for brush-cutters and grass-trimmers.

Annex A of this International Standard is for information only.

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# Forestry machinery — Portable brush-cutters and grass-trimmers — Cutting attachment guard strength

## 1 Scope

This International Standard specifies a test method and the corresponding strength requirements for cutting attachment guards of portable hand-held combustion engine brush-cutters, for use primarily in forestry, and grass-trimmers, to test their safety in practical use. This ensures safety for the operator being protected from thrown objects and unintentional contacts with the cutting attachment.

Another aspect of safety when designing a cutting attachment guard is its dimensions: required dimensions are given in ISO 7918.

NOTE 1 The present edition is ISO 7918:1985 and covers only circular saw-blade guards to brush-saws, but it is anticipated that the new edition will cover cutting attachment guard dimensions for portable brush-cutters, brush-saws and grass-trimmers.

This International Standard does not apply to cutting attachment guards for lawn-trimmers, which are dealt with in ISO 10518<sup>[1]</sup>.

## 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 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 7918:1985, *Forestry machinery — Portable brush-saws — Circular saw-blade guard — Dimensions*.

## 3 Test requirements

When tested in accordance with clause 4, the cutting attachment guard shall not break or crack. The dimensions shall comply with the specification in ISO 7918 before and after the test.

## 4 Test procedure

**4.1** The cutting attachment shall be removed prior to the test. The test shall be carried out at a guard temperature of  $+ 40\text{ °C} \pm 2\text{ °C}$ , and for brush-cutter guards only, at  $- 25\text{ °C} \pm 3\text{ °C}$ . It is not necessary to heat up or cool down the whole brush-cutter. The brush-cutter shall be mounted on a swivel bracket as close to the powerhead as possible, with the cutting attachment guard downwards (see figure 1).

**4.2** The impact on the cutting attachment guard is generated by a total of 50 blows at each temperature (see 4.1) from a steel hammer, suspended on a pendulum length of  $700\text{ mm} \pm 5\text{ mm}$ . The pendulum arm shall be as light as possible. The weight of the hammer shall correspond to a potential energy of the total pendulum system of  $25\text{ J} \pm 0,5\text{ J}$  with the hammer raised to a height in accordance with 4.2.1 and 4.2.2. The hammer shall have a diameter of approximately 85 mm and the edges of the impact plane rounded to a radius of maximum 5 mm.

**4.2.1** The hammer shall be raised to a height of  $1\ 000\text{ mm} \pm 10\text{ mm}$  above the guard and allowed to fall so that it strikes the cutting attachment guard rear edge [see figure 1a)]. There shall be 25 such blows on the rear edge at each temperature (see 4.1).

**4.2.2** The hammer shall be raised to a height of  $1\ 000\text{ mm} \pm 10\text{ mm}$  above the guard and allowed to fall so that it strikes the guard from the side where the cutting attachment rotates towards the guard [see figure 1b)]. There shall be 25 such blows from the side at each temperature (see 4.1).

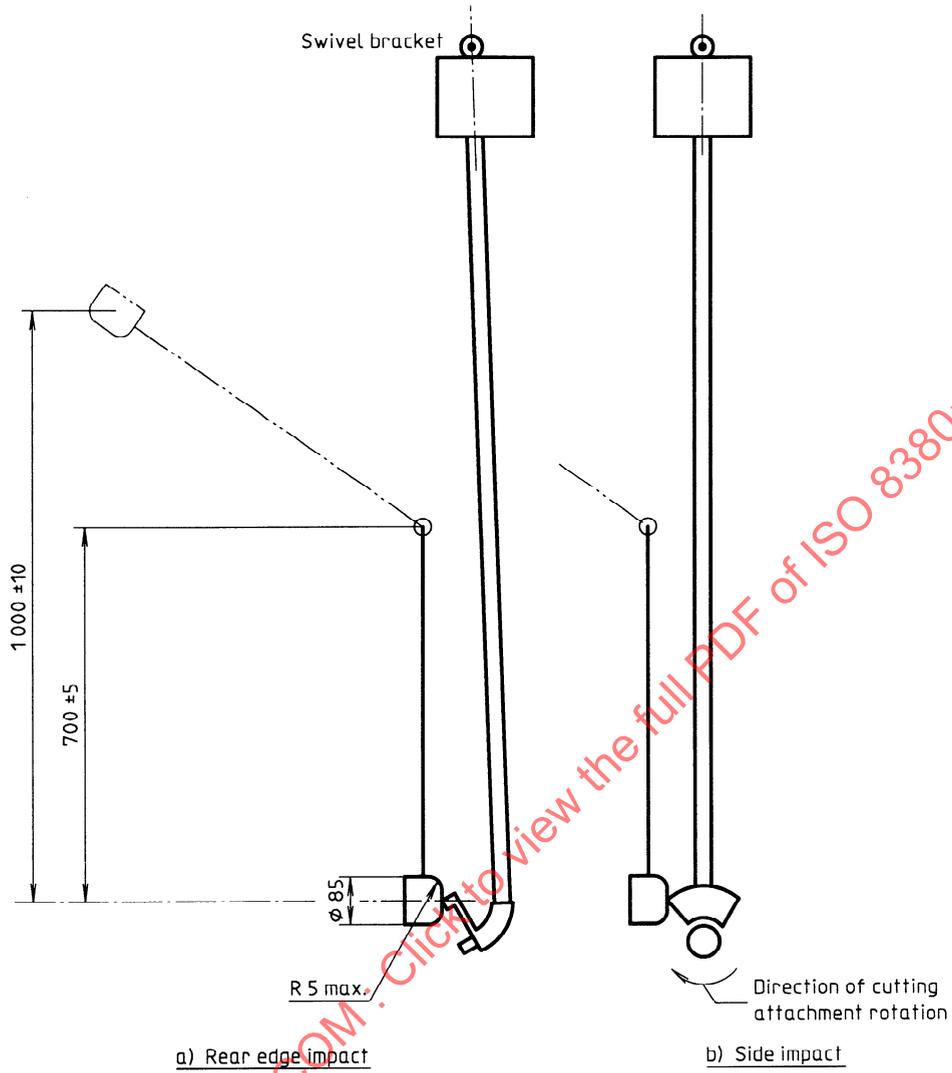


Figure 1 — Test of cutting attachment guard

**Annex A**  
(informative)

**Bibliography**

- [1] ISO 10518:1991, *Powered walk-behind and hand-held lawn trimmers and lawn edge trimmers — Mechanical safety requirements and test methods.*

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