



SLOVENSKI STANDARD

SIST EN 774:1996

01-november-1996

Oprema za nego vrta - Prenosni motorni obrezovalniki žive meje - Varnost

Garden equipment - Hand held, integrally powered hedge trimmers - Safety

Gartengeräte - Tragbare motorbetriebene Heckenscheren - Sicherheit

Matériel de jardinage - Taille-haies portatifs à moteur incorporé - Sécurité

Ta slovenski standard je istoveten z: EN 774:1996

[SIST EN 774:1996](https://standards.iteh.ai/catalog/standards/sist/080354c7-623b-4107-bd4e-7234d4bac28a/sist-en-774-1996)

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ICS:

65.060.70

Vrtnarska oprema

Horticultural equipment

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en

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EUROPEAN STANDARD

EN 774

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1996

ICS 65.060.40

Descriptors: horticultural machines, portable equipment, cutting tools, hedge trimmers, safety requirements, accident prevention, electric motors, internal combustion engines, handles, safety devices, hazards, tests, marking, maintenance

English version

Garden equipment - Hand held, integrally powered hedge trimmers - Safety

Matériel de jardinage - Taille-haies portatifs
à moteur incorporé - Sécurité

Gartengeräte - Tragbare motorbetriebene
Heckenscheren - Sicherheit

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 144 "Tractors and machinery for agriculture and forestry" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at least by October 1996, and conflicting national standards shall be withdrawn at the latest by October 1996.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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0 Introduction

The extent to which hazards are covered is indicated in the scope of this standard. In addition machinery shall comply as appropriate with EN 292 for hazards which are not covered by this standard.

1 Scope

This European Standard specifies safety requirements and their verification for design and construction of hand held integrally driven powered hedge trimmers which are designed for use by one operator, for trimming hedges and bushes utilizing one or more linear reciprocating cutter blades.

It describes methods for the elimination or reduction of hazards arising from their use. In addition, it specifies the type of information to be provided by the manufacturer on safe working practices.

This standard is not applicable to hedge trimmers with rotating blades or hedge trimmers powered by back-pack or other external power source.

The electrical safety aspects of mains powered electric hedge trimmers are covered by EN 50144-1 and prEN 50144-2-15.

The safety aspects of batteries and the electrical safety aspects of battery powered hedge trimmers are not covered by this standard.

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The list of significant hazards dealt with in this standard is given in annex A. Annex A also indicates the hazards which have not been dealt with.

Environmental aspects have not been considered in this standard.

This European Standard applies primarily to machines which are manufactured after the date of issue of the standard.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 292-1	1991	Safety of machinery - Basic concepts, general principles for design - Part 1 : Basic terminology, methodology
EN 292-2	1991	Safety of machinery - Basic concepts, general principles for design - Part 2 : Technical principles and specifications
EN 294	1992	Safety of machinery - Safety distances to prevent danger zones being reached by the upper limbs

EN 563	1994	Safety of machinery - Temperatures of touchable surfaces - Ergonomics data to establish temperature limit values for hot surfaces
EN 50144-1	1995	Safety of hand-held electric motor operated tools -Part 1: General requirements
prEN 50144-2-15	1994	Safety of hand-held electric motor operated tools - Part 2-15 : Particular requirements for hedge trimmers
ISO 3767-1	1991	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 1 : Common symbols
ISO 3767-3	1995	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 3 : Symbols for powered lawn and garden equipment
ISO 3864	1984	Safety colours and safety signs

3 Definitions iTeh STANDARD PREVIEW

For the purpose of this standard, the following definitions apply:

3.1 petrol hedge trimmer: Hedge trimmer powered by petrol.

NOTE: Typical examples are shown in figures 1 a) and b).

3.2 electric hedge trimmer: Hedge trimmer powered by electricity.

NOTE: A typical example is shown in figure 1 c).

3.3 blade tooth: The part of the cutter blade which is sharpened to perform the shearing action (see figure 2).

3.4 cutter blade: A part of the cutting device having blade teeth which cut by shearing action either against other blade teeth or against a shear plate (see figure 2).

3.5 cutting device: That part of the assembly of cutter blade and shear plate, or the cutter blades together with any supporting part, which performs the cutting action.

NOTE: This device may be single or double sided (see figure 2).

3.6 cutting length: The effective cutting length of the cutting device measured from the inside edge of the first blade tooth or shear plate tooth to the inside edge of the last blade tooth or shear plate tooth (see figure 3).

NOTE: Where both blades move the measurements should be taken when the first and last teeth are furthest apart.

3.7 front handle: Handle located at or towards the cutting device. (See figure 1).

3.8 rear handle: Handle located furthest from the cutting device. (See figure 1).

3.9 throttle lock: Device for temporarily setting the throttle in a partially open position to aid starting.

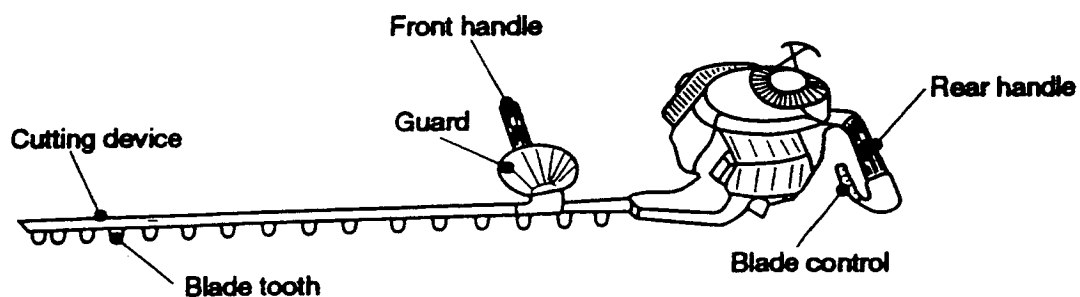
3.10 blade control: A device activated by the operator's hand or finger, for controlling the cutter blade movement. Depending on the application this may require single or two-stage operation.

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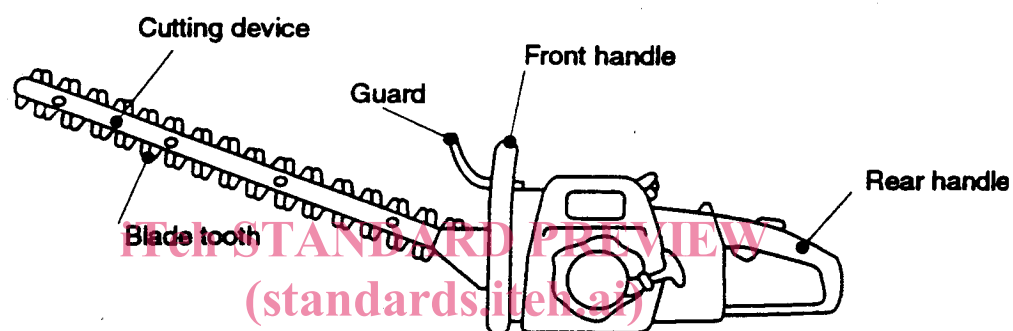
3.11 blunt extension: An extending blunt part of the cutting device or an extending part of an unsharpened plate fitted to the cutting device.

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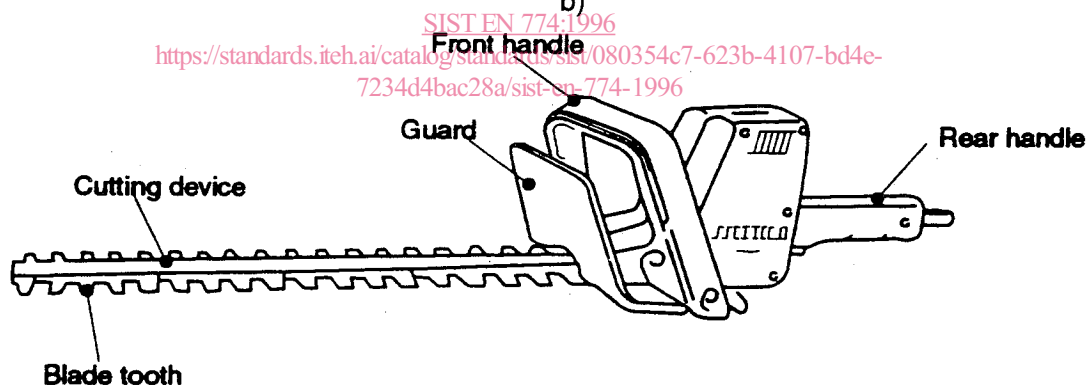
3.12 maximum operating engine/motor speed: The highest engine/motor speed obtainable when adjusted in accordance with the hedge trimmer manufacturer's specifications and/or instructions with the cutting device engaged.



a)

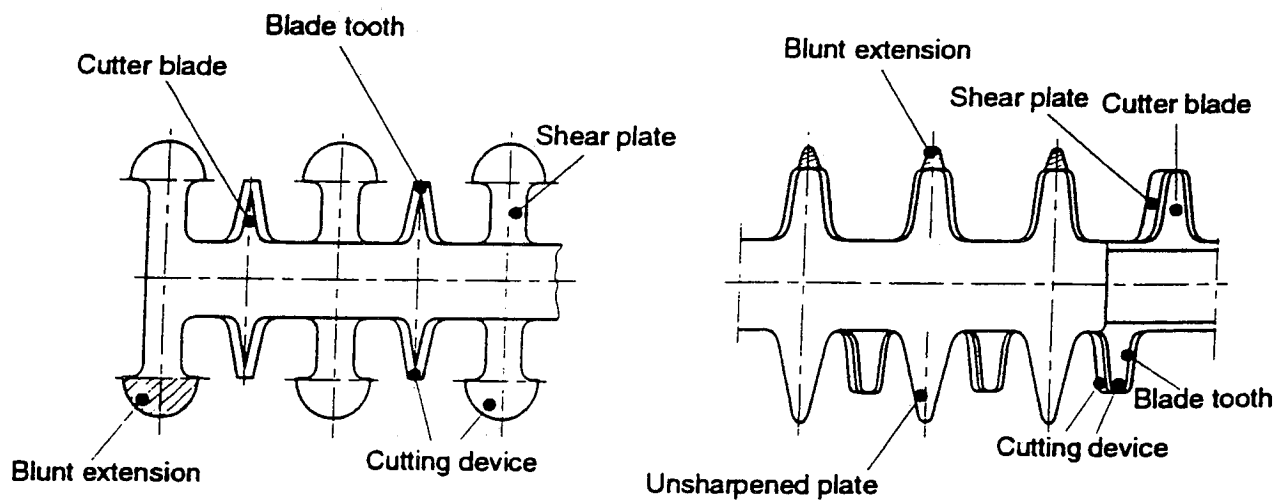


b)



c)

Figure 1: Examples of some different types of hedge trimmer



a) iTeh STANDARD PREVIEW b)
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Figure 2: Parts of a hedge trimmer cutting device
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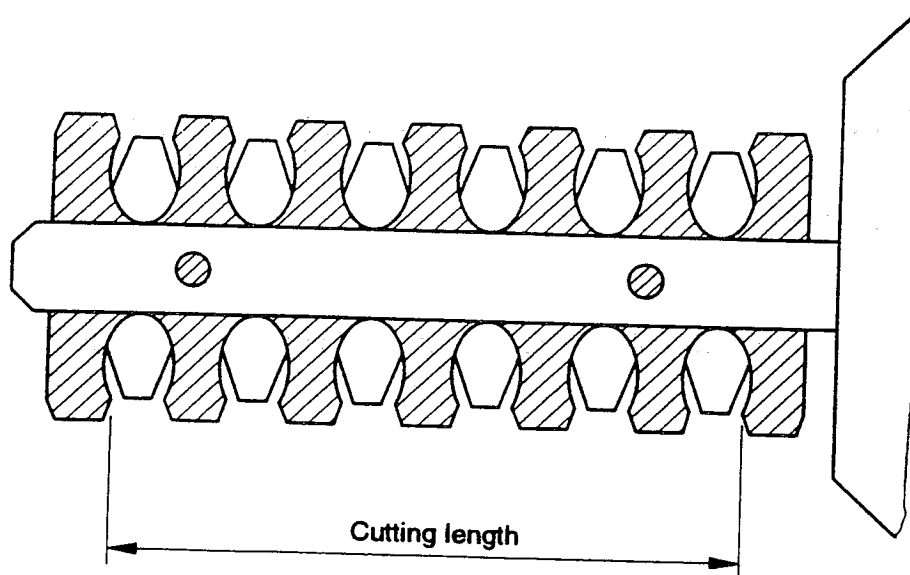


Figure 3: Cutting length

4 Safety requirements and/or measures

4.1 Handles and cutting device

4.1.1 Handles

The number of handles shall be in accordance with table 1.

The handles shall be designed in such a way that each one can be grasped with one hand.

The gripping surface of handles shall be at least 100 mm long. On bail or closed handles (U-shaped handles) this dimension is related to the inner width of the gripping surface. On straight handles it is the complete length between the housing and the end of the handle.

The gripping length of a bail or closed handle shall comprise any length that is straight or curved at a radius of greater than 100 mm together with any blend radius but not more than 10 mm at either or both ends of the gripping surface.

There shall be a minimum radial clearance of 25 mm around the gripping length.

If a part containing the motor complies with the dimensions above it may be considered as a handle.

If a straight handle is supported centrally (ie 'T' type) the gripping length shall be calculated as follows:

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a) for handles with a periphery (not including the support) less than 80 mm the gripping length is the sum of the two parts either side of the support;

b) for handles with a periphery (not including the support) of 80 mm or more the gripping length is the complete length from end to end.

Where appropriate the part of the handle containing the blade control actuator shall be counted as part of the handle gripping length. Finger grip or similar superimposed profiles shall not affect the method of calculating handle gripping length.

Handles shall be positively locked in position. If they are adjustable in different positions it shall not be possible to lock them in a position which contravenes other provisions of this standard.

For handles which are adjustable without the use of a tool it shall not be possible to alter the handle position when the cutting device is powered. When altering the handle position the blade control shall be disabled such that the cutting device can not be powered until the handle is locked into one of its designated operating positions (eg. the control is automatically disengaged from the throttle of the engine if the handle is not locked into one of the positions of use).

Compliance shall be checked by inspection and measurement.

4.1.2 Hand protection

From any handle it shall not be possible to touch the moving cutter blade with fingers spread out.

All handles shall be so located that the test distance from the cutter blade to the side furthest from the cutter blade of any handle is not less than 120 mm. The distance shall be measured along the shortest path from the side of the handle furthest from the cutter blade to the nearest cutting edge of the cutter blade (see figure 4 a)). If there is a guard the distance shall be measured from the furthest side of the handle to the guard and from there to the nearest cutting edge of the cutter blade (see figure 4 b)).

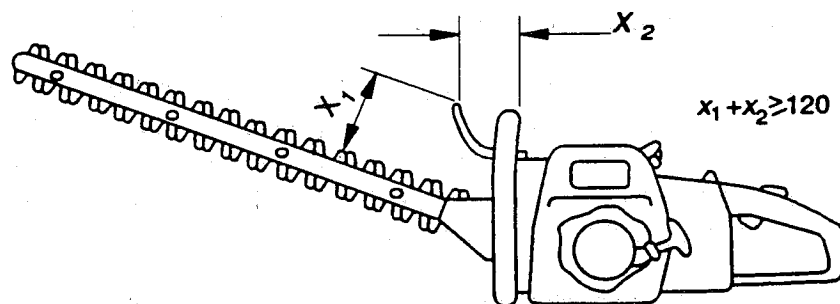
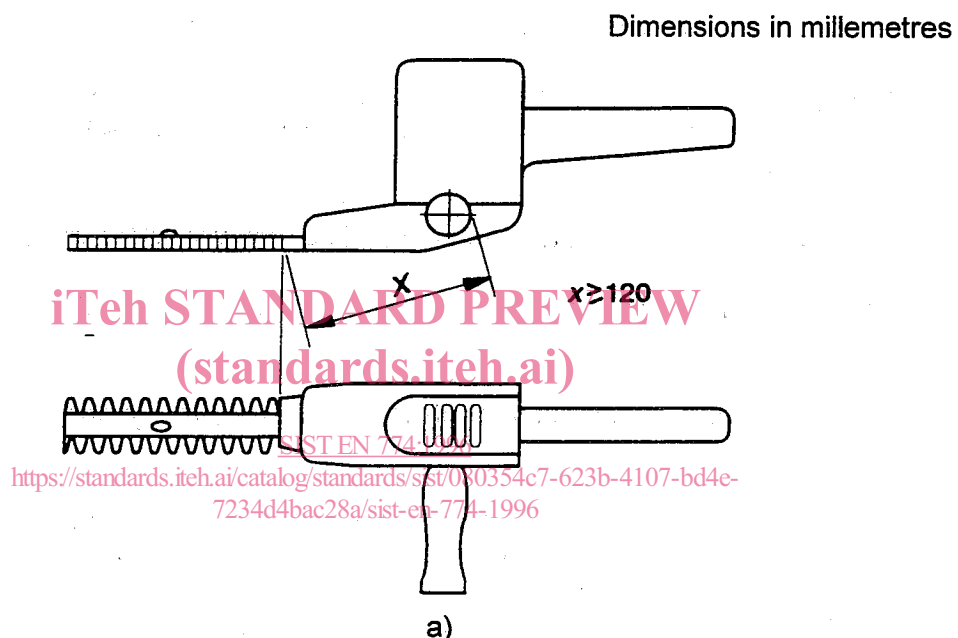


Figure 4: Examples of measurement method for test distance for hand protection in accordance with 4.1.2