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## ISO 7914:2002(E)

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## **Foreword**

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ISO 7914 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 7914:1994), which has been technically revised.



# Forestry machinery — Portable chain-saws — Minimum handle clearance and sizes

## 1 Scope

This International Standard specifies the minimum clearances and related dimensions for the front and rear handles of portable, hand-held chain-saws with combustion engines.

## 2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6533:2001, *Forestry machinery — Portable chain-saw front hand-guard — Dimensions and clearances*

## 3 General requirements

### 3.1 Front handle

The front handle shall be designed and positioned such that it provides an unobstructed surface throughout the working area for a gloved hand operating the saw. See Figure 1.

The working area shall be determined with a type A gauge (100 mm length) in accordance with ISO 6533:2001 and Figure 2. The length of the working area shall be limited either by obstructions of the saw or by the reference points  $X_0$  and  $X_1$ , shown in Figure 2.

The reference point  $X_0$  shall be defined by using the gauge kept furthest to the right side of the front handle. Reference point  $X_1$  shall be defined by using the gauge furthest down to the left side, as shown in Figure 2. In both cases, the gauge shall be kept parallel and directly below or to the side of the centreline of the front handle, and in contact with both the handle and the housing of the machine.

When the machine design is such that a type A gauge cannot be inserted between the handle and the housing, the gauge shall be shortened, but by no more than needed.

### 3.2 Rear handle

The rear handle shall provide enough space behind the throttle trigger for a gloved hand operating the saw and shall not extend in front of the throttle trigger.

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### 4 Clearance dimensions

The minimum clearance dimensions of the handles shall be as given in Table 1, which also indicates the figure illustrating each dimension (see Figures 1 to 6).

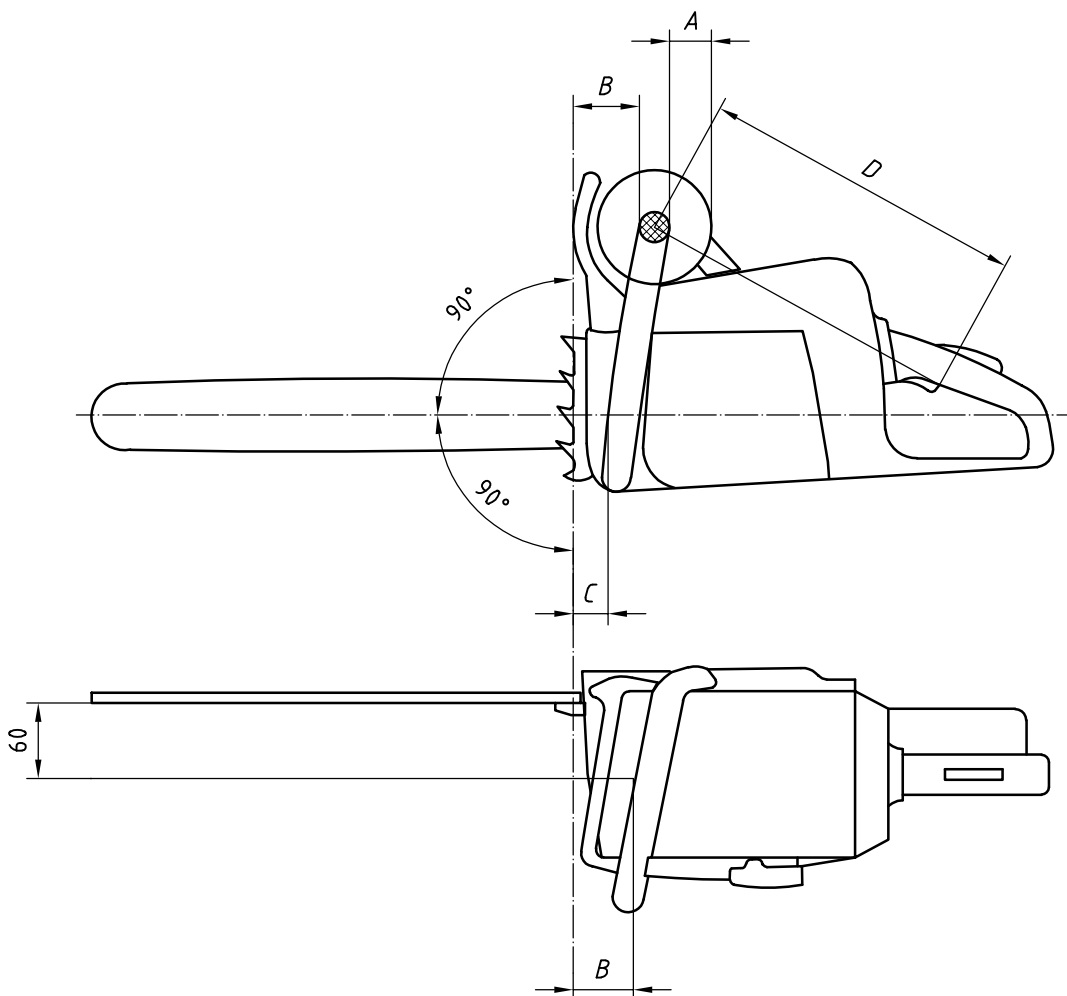
**Table 1 — Clearance dimensions**

Handles	Description	Dimension	Figure		Minimum size mm
			Forest work	Tree work service	
Front	Finger clearance in the grip area	<i>A</i>	1	1	35
	Handle grip area	—	2	2	—
	Clearance between the front of the chain-saw body and the handle at the top measured 60 mm to the left of the guide bar plane <sup>a</sup>	<i>B</i>	1	3	38
	Clearance between the front of the chain-saw body and the handle measured at the centreline of the guide bar	<i>C</i>	1	3	25
Front and rear	Perimeter of the cross-section of the handle	<i>H</i>	6	6	65
	Distance from the rear side of the throttle trigger to the centre of the front handle at the top	<i>D</i>	1	—	225
Rear <sup>b</sup>	Finger clearance at the released throttle trigger	<i>E</i>	4	3	30
	Clearance below the released throttle trigger	<i>F</i> <sub>1</sub>	4	—	35
		<i>F</i> <sub>2</sub>	—	4	25
	Clearance behind the released throttle trigger	<i>G</i> <sub>1</sub>	5	—	4 × 25
		<i>G</i> <sub>2</sub>	—	3	3 × 25

<sup>a</sup> If the saw is provided with a spiked bumper, the measurement shall be made from the plane of the root of the bumper teeth.

<sup>b</sup> The dimensions shall be gauged free of play, i.e. with a slight initial pressure on the throttle trigger.

Dimensions in millimetres

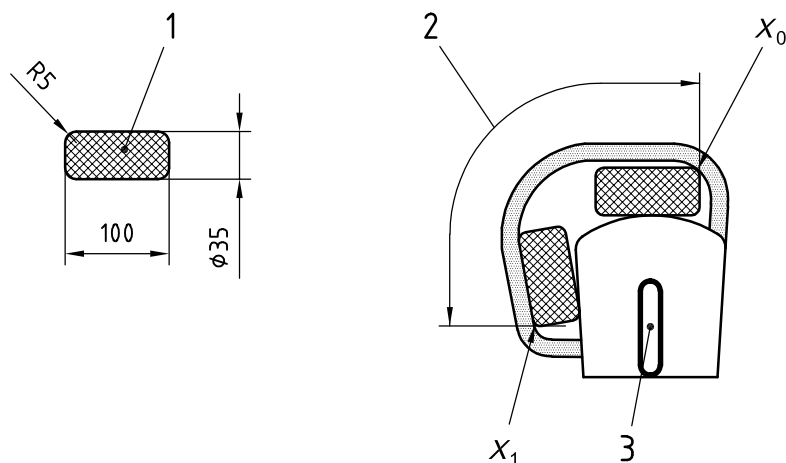


NOTE For  $A$ ,  $B$ ,  $C$  and  $D$ , see Table 1.

Figure 1 — Clearance and distance between front and rear handles of chain-saw for forest work

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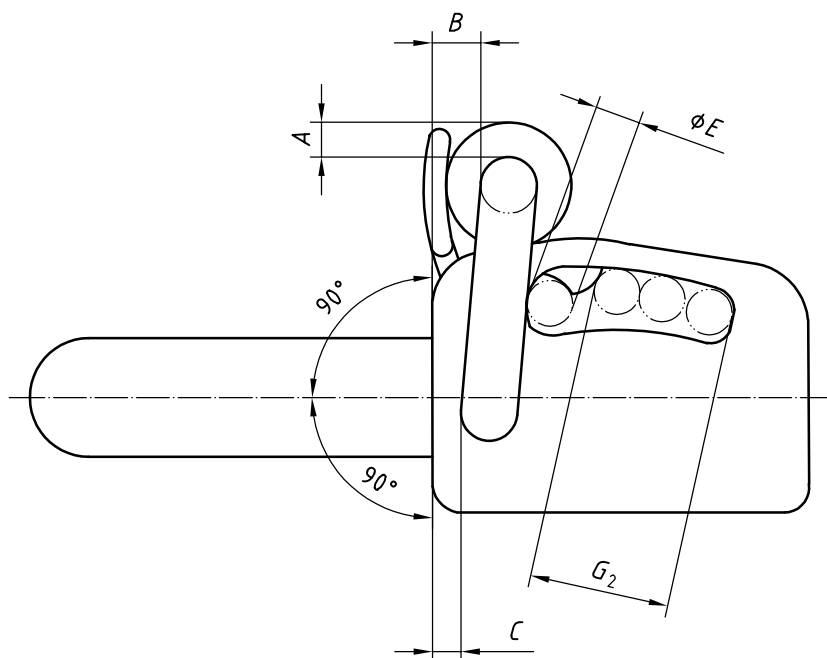
Dimensions in millimetres



## Key

- 1 Gauge A (see ISO 6533:2001)
- 2 Grip area
- 3 Rear handle

Figure 2 — Handle grip area

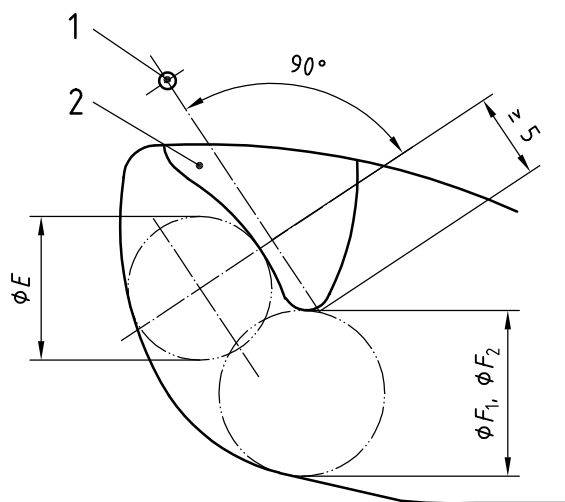


NOTE For  $A$ ,  $B$ ,  $C$ ,  $E$  and  $G_2$ , see Table 1.

Figure 3 — Front- and rear-handle clearances for chain-saws for tree service



Dimensions in millimetres

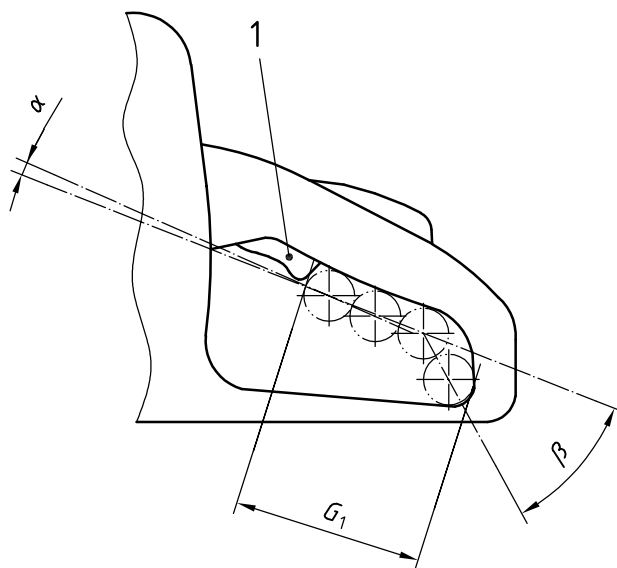


NOTE For  $F_1$  and  $F_2$ , see Table 1.

**Key**

- 1 Pivot point
- 2 Throttle trigger

**Figure 4 — Finger clearances at released throttle trigger**



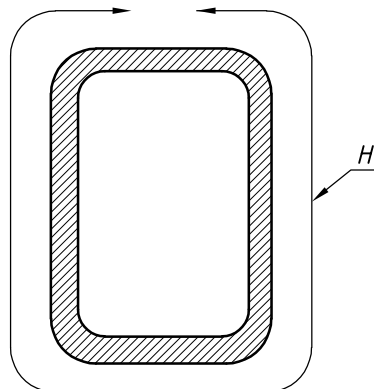
NOTE For  $G_1$ , see Table 1.

**Key**

- 1 Throttle trigger
- $\alpha = -15^\circ$  to  $+15^\circ$   
 $\beta = -75^\circ$  to  $+75^\circ$

**Figure 5 — Clearance behind released throttle trigger**

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NOTE For  $H$ , see Table 1.

**Figure 6 — Perimeter of handle cross-section**



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