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Safety of hand-held motor-operated electric tools – Part 2-5: Particular requirements for circular saws

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Titre :

Title: IEC 60745-2-5-A2 Ed 3.0: Safety of hand-held motor-operated electric tools – Part 2-5: Particular requirements for circular saws.

Note d'introduction

Introductory note

ATTENTION	ATTENTION
CDV soumis en parallèle au vote (CEI) et à l'enquête (CENELEC)	**Parallel IEC CDV/CENELEC Enquiry**

***Add** after clause 19.1:*

19.3 This subclause is not applicable.

***Replace** the existing clause 19.101 by the following:*

19.101 Guarding above the guide plate

19.101.1 The blade above the guide plate shall be guarded by the upper guard.

19.101.2 Apertures in the guarding system above the guide plate, unless otherwise specified below, shall be designed such that the test probe 'a' of Figure 105, when inserted at any angle and to the depth allowed by its stop, shall not be able to contact the cutting edge zone of any recommended blade.

19.101.2.1 On the motor side of the upper guard, adjacent to the cutting edge zone at the front of the blade an aperture may be provided for viewing the line of the cut. This viewing aperture shall either meet the requirements of 19.101.2, as illustrated in Figure 106, or it shall be limited by proximity and height restrictions.

- Proximity restriction

The straight line distance from a defined measuring point on the auxiliary handle surface to the cutting edge zone of any recommended blade shall be a minimum of 120 mm as shown in Figure 107. If there is no auxiliary handle provided, the distance shall be measured from the motor casing.

Compliance is checked by the following measurements, which shall be conducted with the guide plate set to any depth of cut and 90°.

To establish the measuring point on the auxiliary handle or the motor casing, follow the procedure outlined below.

a) Establish the closest (A) and the most distant (B) points on the auxiliary handle or motor casing from the blade. For the motor casing, the closest (A) point to the blade is assumed to be in the plane of the main handle farthest from the blade. Equidistant between points (A) and (B), but not more than 45 mm away from point (A), draw the vertical intersecting line of the plane parallel with the blade and the surface of the auxiliary handle or motor casing, as applicable.

b) Establish the closest (C) and the most distant (D) point from the plane of the guide plate on the auxiliary handle or motor casing. Equidistant between points (C) and (D), draw the horizontal intersecting line of the plane parallel with the guide plate and the surface of the auxiliary handle or motor casing, as applicable.

c) The intersection of the vertical and horizontal lines drawn on the applicable surface is the defined measuring point.

- Height restriction

The height of the viewing aperture (*H*) measured from the bottom plane of the guide plate, as shown in Figure 108a, is limited to the point where the line of sight, from the ordinary operator's head position to the tip of the saw blade cutting the wood, is intersecting the outer surface of the upper guard.

The maximum permissible height *H,* in millimetres, is given by the formula

$$H = \frac{848\,U}{205 + S}$$

where

U is the maximum distance, in millimetres, from the cutting edge zone to the outer surface of the upper guard at the top end of the viewing aperture, measured perpendicularly to the plane of the saw blade (see Figure 108b);

S is the distance, in millimetres, from the plane of the saw blade to a parallel centreplane of the switch handle (see Figure 108c).

Compliance is checked by measurement, which shall be conducted with the guide plate set to maximum depth of cut and 90°.

19.101.2.2 The upper guard on the side opposite the motor need not completely cover the blade. The perpendicular projection of the upper guard on to the blade shall cover at least the smallest recommended blade-cutting edge zone. The space between the upper guard and the blade shall be designed such that the test probe 'a' of Figure 105 when inserted at any angle and to the depth allowed by its stop, shall not be able to contact the saw blade teeth tips of the recommended blade, as illustrated in Figure 106.

19.101.2.3 For saws having an inclinable guide plate, the distance *X* between the guide plate and the edge of the lateral side of the upper guard on the side opposite to the motor and adjacent to the front cutting edge zone of the blade, as shown in Figure 109, shall not exceed:

a) 38 mm for circular saws with a blade diameter less than 265 mm;

b) 45 mm for circular saws with blade diameter equal or greater than 265 mm;

c) 55 mm for circular saws with blade diameter equal or greater than 265 mm and where the lower guard is not provided with any retracting handle and the only means for operating the lower guard is remotely from the motor side of the upper guard.

Compliance is checked by measurement of the distance X along the lines perpendicular to the plane of the guide plate, as shown in Figure 109.

For all saws where the depth of the cut setting is achieved by pivoting the guide plate front of the blade, the measurements shall be conducted with the guide plate set for the 90° setting and to maximum depth of cut.

For saws where the depth of the cut setting is achieved by pivoting the guide plate at the rear of the blade or where the guide plate at minimum and maximum depth are parallel, the measurements shall be conducted with the guide plate set for the 90° setting and to any depth of cut.

19.101.2.4 For checking the accessibility of the cutting edge zone at the front of the saw above the guide plate, the rigid test probe ‘b’ of Figure 110 shall not contact the blade when the saw is set for a 90° cut and any depth of cut and the probe ‘b’ is centred with the blade then advanced in any single plane perpendicular to the blade and parallel to the guide plate, as specified in Figure 111. The test is repeated with probe ‘b’ offset 13 mm to the right of the blade centre and then offset 13 mm to the left of the blade centre.

Compliance is checked by inspection and measurements.

19.101.3 Plunge type saws (see Figure 104) shall be equipped with an upper guard into which any recommended blade shall automatically retract when not in use. The opening in the upper guard for the passage of the blade and riving knife, if any, shall comply with 19.101.2, as illustrated in Figure 106. The upper guard shall lock the blade automatically in the closed position, when the guide plate is not in contact with the work piece and held in any position likely to occur in normal use.

The minimum opening for the plunging movement of the motor with respect to the upper guard may be provided between the guide plate and the lower side of the motor.

Compliance is checked by inspection and measurements.

***Replace** the existing Figure 109 by the following one:*

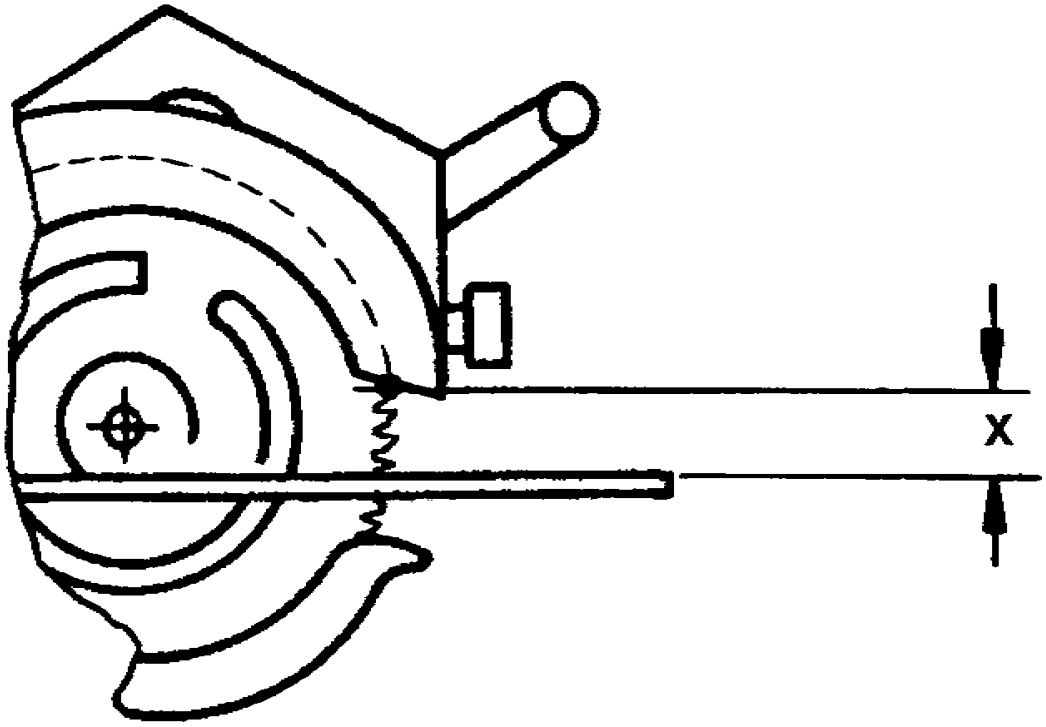

Figure 109 – Distance from the edge of the lateral side of the upper guard to the guide plate