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GB/T 3883.311-2019 / IEC 62841-3-10:2015

Replacing GB/T 13960.11-2000

**Safety of motor-operated hand-held, transportable and
garden tools - Part 311: Particular requirements for
transportable cut-off machines**

手持式、可移式电动工具和园林工具的安全 第 311 部分:可移式型
材切割机的专用要求

(IEC 62841-3-10:2015, Electric motor-operated hand-held tools, transportable
tools and lawn and garden machinery - Safety - Part 3-10: Particular
requirements for transportable cut-off machines, IDT)

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Table of Contents

Foreword.....	4
Introduction	7
1 Scope.....	9
2 Normative references.....	10
3 Terms and definitions	10
4 General requirements	11
5 General conditions for the tests	11
6 Radiation, toxicity and similar hazards.....	11
7 Classification.....	11
8 Marking and instructions	12
9 Protection against access to live parts	16
10 Starting	16
11 Input and current	16
12 Heating	16
13 Resistance to heat and fire	16
14 Moisture resistance.....	17
15 Resistance to rusting	17
16 Overload protection of transformers and associated circuits	17
17 Endurance.....	17
18 Abnormal operation.....	17
19 Mechanical hazards	18
20 Mechanical strength.....	24
21 Construction.....	26
22 Internal wiring.....	26
23 Components.....	26
24 Supply connection and external flexible cords	26
25 Terminals for external conductors	26
26 Provision for earthing	27

27 Screws and connections	27
28 Creepage distances, clearances and distances through insulation.....	27
Annexes	33
Annex I (informative) Measurement of noise and vibration emissions	34
Annex K (normative) Battery tools and battery packs	35
Bibliography	36

Foreword

Part 3 Portable power tools of “Safety of motor-operated hand-held, transportable and garden tools” currently consists of the following two parts:

- GB/T 3883.306-2017 “Safety of motor-operated hand-held, transportable and garden tools - Part 3: Particular requirements for transportable diamond drills with liquid systems”;
- GB/T 3883.311-2019 “Safety of motor-operated hand-held, transportable and garden tools - Part 311: Particular requirements for transportable cut-off machines”.

This Part is Part 311 of GB/T 3883.

This Part was drafted in accordance with the rules given in GB/T 1.1-2009.

This Part replaces GB/T 13960.11-2000 “Safety transportable motor-operated electric tools - Part 2: Particular requirements for cutting-off grinders”. Compared with GB/T 13960.11-2000, the main technical changes are as follows:

- added cutting objects such as concrete and masonry into the scope of application; added the use of diamond cutting wheels; clarified the type, line speed and range of the grinding wheel used; added the inapplicable scope of this Part (see Clause 1 of this Edition);
- in terms, added “inner flange”, “bonded reinforced wheel”, “cutting unit”, “D”, “diamond wheel”, “fence”, “outer flange” and “rest position”; modified “cut-off machine” and “wheel guard”; deleted “spindle”, “clamping plate assembly”, “straight edge groove clamping plate” and “workpiece fixing device” (see Clause 3 of this Edition, Clause 2 of 2000-Edition);
- In general test conditions, added the description of parts that shall be included in tool mass (see Clause 5 of this Edition);
- modified Table 4 of Part 1 in abnormal operation (see Clause 18);
- In mechanical hazard: added prevention of overspeed testing in 19.6; added the requirements for anti-dumping test and easy fixing of tools in 19.7; added the general requirements of grinding wheel protection in 19.101.1; modified the original 18.1.103, 18.1.104 and 20.17 to 19.101.2, that is, improved the requirements of the wheel guard; modified the original 18.104 to 19.101.3, and improved the protection of the grinding wheel under the table; modified the original 18.1.105 to 19.102, that is, improved the deflection of splashing; modified the original 18.101 to 19.103, that is, improved the fixation of workpiece; added the installation of 19.104

accessories; modified the original 18.102 to 19.105.1 and 19.105.2, that is, improved the general requirements and minimum dimensions of flanges; added the dimension requirements of diamond cutting wheel flange in 19.105.3; added 19.105.4 flange strength test; modified 18.103 to 19.106, and improved the requirements of tool spindle (see Clause 19 of this Edition, Clause 18 of 2000-Edition);

- modified mechanical strength from 18.1.102 to 20.101 and 20.102; improved the strength requirements of the wheel guard (see Clause 20 of this Edition, Clause 18 of 2000-Edition);
- revised the structure from 20.18 of the original Part 1 to 21.18.2.1 and improved the requirements of the power switch; added non-applicable clauses corresponding to Part 1 (see Clause 21 of this Edition, Clause 20 of 2000-Edition);
- added 23.3 to corresponding Part 1 in components (see Clause 23 of this Edition);
- modified the power connection and the external soft wire from 23.2 to 24.4, that is, improved power cord material requirements (see Clause 24 of this Edition, Clause 23 of 2000-Edition);
- added the informative Annex I “Noise and vibration measurement” (see Annex I of this Edition).

This Part used translation method to identically adopt IEC 62841-3-10:2015 “Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 3-10: Particular requirements for transportable cut-off machines”.

The Chinese document which has consistency with the international normative reference in this Part is as follows:

- GB/T 4127.15-2007 “Bonded abrasive products – Dimensions - Part 15: Grinding wheels for cutting-off on stationary or mobile cutting-off machines” (ISO 603-15:1999, MOD);
- GB/T 34560 (all parts) “Structural steels” [ISO 630 (all parts)].

This Part made the following editorial modifications:

- changed the standard name to “Safety of motor-operated hand-held, transportable and garden tools - Part 311: Particular requirements for transportable cut-off machines”;
- this Part incorporated the content of IEC 62841-3-10:2015/COR1:2016.

Safety of motor-operated hand-held, transportable and garden tools - Part 311: Particular requirements for transportable cut-off machines

1 Scope

This clause of GB/T 3883.1-2014 is applicable, except as follows:

Addition:

This Part applies to transportable cut-off machines intended to cut materials such as metals, concrete and masonry and to be fitted with one abrasive

- bonded reinforced wheel of Type 41, or
- diamond cut-off wheel with the peripheral gaps, if any, not exceeding 10 mm;

and with

- a rated no-load speed not exceeding a peripheral speed of the wheel of 100 m/s with the maximum wheel diameter and
- a wheel diameter range of 250 mm to 410 mm.

NOTE 1: Unless otherwise specified, the "grinding wheel" in this Part includes the "bonded reinforced wheel of Type 41" and "diamond wheel" specified in the scope.

This Part does not apply to:

- transportable miter saws;
- transportable tile saws;
- transportable metal saws.

NOTE 2: Transportable miter saws are covered by IEC 62841-3-9. Transportable tile saws and transportable metal saws will be covered by a future part of IEC 62841-3.

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