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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

LY/T 3169-2019

**Garden and forestry machinery - Hand-held chain-saws for tree
service with lithium-ion battery as power source
(English Translation)**

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Foreword

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

Please note that some elements of this document may involve patents. The issuer of this document is not responsible for identifying these patents.

This standard is proposed and managed by the National Forestry Machinery Standardization Technical Committee (SAC/TC 61).

1 Scope

This standard specifies the terms and definitions of hand-held pruning chain saws (hereinafter referred to as "lithium electric pruning saws") with lithium ion batteries as the power source, Model preparation method, basic parameters, technical requirements and test methods, signs, instruction manuals, packaging, transportation, storage and handling.

This standard applies to power supply under normal environmental conditions with a nominal voltage not greater than DC 75 V rechargeable lithium-ion battery pack (battery pack) Lithium electric pruning saw for trimming canopies and materials.

This standard does not apply to.

-Hand-held lithium electric chain saw whose structure complies with the definition in LY/T 3022-2018;

-A pruning chain saw powered by a user-installed universal battery pack or battery pack;

-Other pruning chain saws with non-lithium ion batteries as the power source.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

GB/T 191 Packaging, storage and transportation icon GB/T 755 rotating machine quota and performance GB/T 3883.1 Safety of hand-held, portable power tools and garden tools. Part

1. General requirements GB/T 3883.14-2007 Safety of hand-held power tools Part 2. Special requirements for chain saw GB 4343.1 EMC requirements for household appliances, power tools and similar appliances Part 1. Emissions GB/T 9480 Rules for the preparation of manuals for agricultural and forestry tractors and machinery, lawn and garden power machinery GB/T 13384 General technical requirements for packaging of electromechanical products GB/T 18516 Test method for sawing efficiency and fuel consumption of portable chainsaws Engineering method GB/T 18960 Glossary of portable chainsaws for forestry machinery GB 19726.2-2013 Forestry machinery. Safety requirements and tests for portable chainsaws. Part 2. Pruning chainsaws GB/T 21418 General technical specifications of permanent magnet brushless motor systems GB/T 34570.1 Safety of rechargeable battery packs and chargers for power tools. Part 1. Safety of battery packs GB/T 34570.2 Safety of rechargeable battery packs and chargers for power tools. Part 2. Safety of chargers LY/T 1187 chain saw for forestry machinery LY/T 1188 chain guide for forestry machinery LY/T 1346 Determination of balance and maximum holding torque of portable chainsaws for forestry machinery LY/T 1347-1999 Determination of strength of chainsaw handles for forestry machinery LY/T 3022-2018 garden machinery hand-held chain saw with lithium ion battery as power source IEC 60335-2-29 Safety of household and similar electrical appliances. Part 2-29. Particular requirements for battery chargers (Household and similar electrical appliances- Safety -Part 2-29. Particular requirements for battery chargers) LY/T 3170-2019 IEC 61960-3 Batteries and accumulator batteries containing alkaline or other non-acid electrolytes. Portable lithium batteries and accumulator batteries. Part 3 Points. prismatic and cylindrical lithium batteries and batteries (Secondary cells and batteries containing alkaline or other non-acid electrolytes-Secondary lithium cells and batteries for portable applications-Part

3 Prismatic and cylindrical lithium secondary cells and batteries made from them)

IEC 62133-2.:2017 Portable sealed batteries and accumulators containing alkaline or other non-acid electrolytes Safety Requirements for Groups Part 2. Lithium IEC 62841-1.:2014 Safety of hand-held, portable power tools and garden tools. Part 1. General requirements (Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery-Safety-Part 1. General requirements) IEC 62841-4-1.:2017 Safety and security of hand-held, portable power tools and garden tools-Part 4-1. Chain saws Special requirements (Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery-Safety -Part 4-1. Particular requirements for chain saws) ISO 3767-5 Agricultural and forestry tractors and machinery, lawn and horticultural power machinery Operator symbols for operator controls and other display devices Part 5 Some portable forestry machinery operators control symbols and other marks (Tractors, machinery for agriculture and forestry, powered lawn and garden equipment -Symbols for operator controls and other displays-Part 5. Symbols for manual portable forestry machinery) 3 terms

and definitions the following terms and definitions defined in GB/T 18960, GB/T 3883.14-2007 and IEC 62133-2.:2017 apply to this document.

Lithium battery chain-saw for tree service Powered by a rechargeable lithium-ion battery pack (battery pack) with a nominal voltage not greater than 75 V DC (without guides, saw chains, empty oil) Box, excluding backpack-type battery pack connected to the whole machine through a flexible cord) not exceeding 5.0 kg, for a trained operator to hold the upper handle with his right hand, Use your left hand to hold the side saw for trimming the canopy and making materials (see Figure 1).

Explanation.

- 1--front hand guard; 6--stop chain pin;
- 2--side handle; 7--wooden teeth;
- 3--Trigger; 8--Guide plate;
- 4--Upper handle; 9--Guide cover;
- 5--Hooking ring; 10--Saw chain.

Figure 1 Schematic diagram of lithium battery pruning saw

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Nominal voltage

The product of the nominal voltage of a single cell and the number of cells in series.

Note: The unit is volt.

Cutting efficiency

Under the load of rated output state, the lithium electric pruning saw cuts the area of the standard specimen per unit time.

Note: The unit is square centimeter per second (cm²/s).

Sawing power consumption rate Standard sample area cut by a lithium battery pruning saw that consumes unit power.

Note: The unit is square centimeter per watt hour (cm²/Wh).

Net mass of the machine Under working conditions, the guide plate and saw chain as specified in the installation instructions, and a pluggable adapter battery pack the quality of lithium electric pruning saws, except for battery packs), without a knife cover, and without lubrication.

DC power supply

A device that can simulate a battery pack to provide a stable DC power supply to a load