

Power tools and lawn and garden machinery



Understanding the technical requirements given in applicable safety standards for power tools and lawn and garden machinery can help manufacturers:

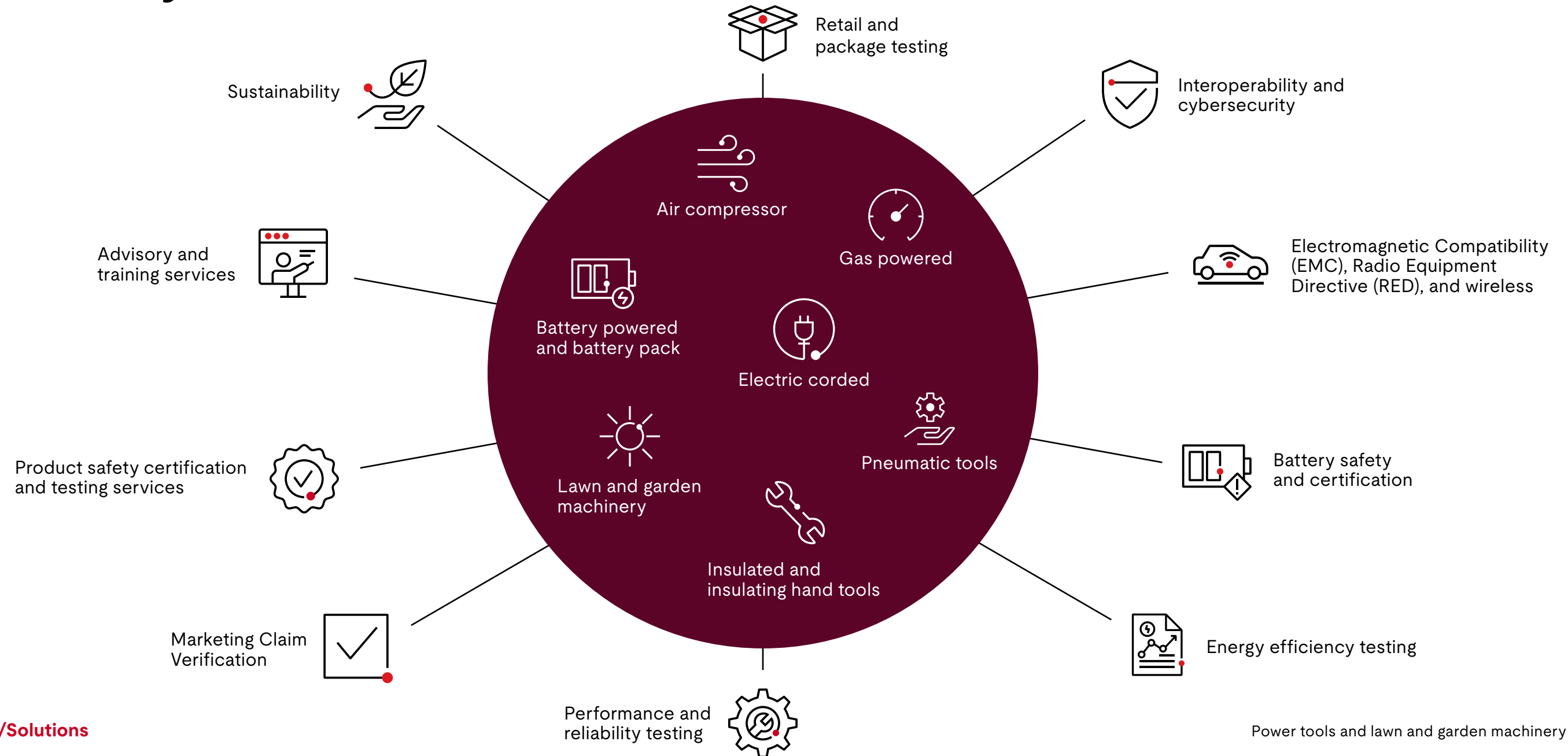
- Avoid costly testing and certification delays
- Minimize rework and redesign resulting from incorrect markings and instructions
- Reduce construction nonconformances, improper sample submissions and non-compliant test results
- Streamline access to the market

UL Solutions can help manufacturers understand and navigate both general and particular certification requirements throughout the product development process and support global market access.

Our team will help you understand requirements for common tests, markings, instruction and safety manuals, construction elements, plus specific tool elements that must be addressed.



UL Solutions services for power tools and lawn and garden machinery manufacturers



UL Solutions safety testing and certification services

When launching a new product, you want to be sure that it complies with market requirements. As a leading expert in safety science, UL Solutions can provide certification and testing as well as market entry advisory and training services for your global access needs. In this way, we can help you understand your compliance and market access requirements.



UL Mark

The UL Mark is one of the most accepted certification marks in North America, appearing on 22 billion products annually. The UL Mark demonstrates that we have tested representative samples of your product and determined that the product meets specific, defined requirements. Throughout the world, we are the only certification organization authorized to issue the UL Mark.



IECEE CB Scheme

When you want to export an electrical or electronic product globally, the certified body (CB) test report is one of the key elements to consider. The CB Scheme is an international system for mutual acceptance of test reports and certificates dealing with safety. The International Electrotechnical Committee for Conformity Testing to Standards for Electrical Equipment (IECEE) oversees the CB Scheme.

UL is a National Certification Body (NCB). NCBs operate national certification schemes for electrotechnical equipment and components and issue CB Test Certificates. CB Test Certificates are based on Test Reports. Testing is conducted at one of our many CB Testing Laboratories (CBTLs).



CE and UKCA marking

CE (conformité européenne) marking is essential in the European Economic Area (EEA). The CE marking demonstrates that your product complies with all the applicable European Union directives and regulations. Although the CE marking is a self-declaration, understanding how to navigate complex European mandatory CE marking requirements, as well as voluntary certification programs, can help speed up your time to market. In addition, to get the CE marking on power tools according to EMC and RED directives, it is necessary to have the products tested by a Notified Body.

With an extensive knowledge of European and UK standards, we support you in testing your products and in compiling the associated documentation required to declare CE and UKCA Marking compliance. UL is a Notified Body for CE marking and an Approved Body for UKCA marking. We offer flexible, customized services to help you fulfill Declarations of Conformity (DoC) and Technical Documentation Files (TDF).



Product types and standards

Portable tools	UL Standards	IEC Standards
Concrete vibrators	UL 60745-2-12	IEC 62841-2-12
Fastener driving tools	UL 60745-2-16	IEC 62841-2-16
Strapping tools	UL 60745-2-18	IEC 62841-2-18
Jointers	UL 60745-2-19	IEC 62841-2-19
Band saws	UL 60745-20	IEC 62841-2-20
Cut-off machines	UL 60745-22	IEC 60745-2-22
Die grinders, small rotary tools	UL 60745-23	IEC 62841-2-23
Machine tools for industrial metalworking and woodworking	UL Standards	IEC Standards
Grinding machines	UL 2565 UL 987	ISO 16089
Machining Centers, milling machines, transfer machines	UL 2565 UL 987	ISO 16090-1
Presses	UL 2565 UL 987	ISO 16092 series
Sawing machines for cold metal	UL 2565 UL 987	ISO 16093
Turning machines	UL 2565 UL 987	ISO 23125
Electric discharge machines	UL 2565 UL 987	ISO 28881
Woodworking	UL 2565 UL 987 O1.1 woodworking	ISO 19085 series woodworking

Portable hand-held tools, transportable tools, lawn and garden machinery	UL Standards	IEC Standards
General requirements	UL 60745-1 UL 62841-1	IEC 60745-1 IEC 62841-1
Hand-held tools	UL Standards	IEC standards
Drills, impact drills	UL 62841-2-1	IEC 62841-2-1
Screwdrivers, impact wrenches and ratchet tools	UL 62841-2-2	IEC 62841-2-2
Grinders, polishers and disk-type sanders	UL 62841-2-3	IEC 62841-2-3
Sanders and polishers other than disk type	UL 62841-2-4	IEC 62841-2-4
Circular saws	UL 62841-2-5	IEC 62841-2-5
Hammers	UL 62841-2-6	IEC 62841-2-6
Shears and nibblers	UL 62841-2-8	IEC 62841-2-8
Tappers and threaders	UL 62841-2-9	IEC 62841-2-9
Mixers	UL 62841-2-10	IEC 62841-2-10
Reciprocating saws	UL 62841-2-11	IEC 62841-2-11
Planers	UL 62841-2-14	IEC 62841-2-14
Routers	UL 62841-2-17	IEC 62841-2-17
Drain cleaners	UL 62841-2-21	IEC 62841-2-21

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Product types and standards (continued)

Transportable tools	UL Standards	IEC standards
Table saws	UL 62841-3-1	IEC 62841-3-1
Planers	UL 987	IEC 62841-3-3
Bench grinders	UL 62841-3-4	IEC 62841-3-4
Band saws	UL 62841-3-5	IEC 62841-3-5
Diamond drills with liquid system	UL 62841-3-6	IEC 62841-3-6
Wall saws	UL 62841-3-7	IEC 62841-3-7
Single-spindle vertical moulders	UL 987	IEC 62841-3-8
Miter saws	UL 62841-3-9	IEC 62841-3-9
Cut-off machines	UL 62841-3-10	IEC 62841-3-10
Combined Miter bench saws	UL 987	IEC 62841-3-11
Threading machines	UL 62841-3-12	IEC 62841-3-12
Drills	UL 62841-3-13	IEC 62841-3-13
Drain cleaners	UL 62841-3-14	IEC 62841-3-14
Magnetic drills	UL 987	IEC 62841-3-15
Radial arm saws	UL 987	IEC 61029-2-2
Mitre bench saws	UL 987	IEC 61029-2-11
Laser engravers	UL 62841-3-1000	—

Lawn and garden machinery	UL Standards	IEC standards
Edgers, cultivators, shredders, shredder-baggers, chippers, pruning shears, pole pruners	UL 82	—
Chain saws	UL 62841-4-1	IEC 62841-4-1
Hedge trimmers	UL 62841-4-2	IEC 62841-4-2
Pedestrian controlled walk-behind lawn mowers	UL 62841-4-3	IEC 62841-4-3
Lawn and edge trimmers, grass trimmers, brush cutters, brush saws	UL 62841-4-4	IEC 62841-4-4
Grass shears	UL 62841-4-5	IEC 62841-4-5
Garden blowers, garden vacuums, garden blower/vacuums	UL 62841-4-6	IEC 62841-4-6
Pedestrian controlled walk-behind lawn scarifiers and aerators	UL 62841-4-7	IEC 62841-4-7
Utility machines	UL 62841-4-1000	—
Battery-operated ride-on lawnmowers	UL 2753	—

Stationary tools up to 5 hp	UL Standards	IEC Standards
All	UL 987	—

- UL 60745, Hand-Held Motor-Operated Electric Tools – Safety
- UL 62841, Electric Motor-Operated Hand-Held Tools, Transportable Tools and Lawn and Garden Machinery – Safety
- UL 987, the Standard for Stationary and Fixed Electric Tools
- UL 2565, the Standard for Industrial Metalworking and Woodworking Machine Tools
- UL 82, the Standard for Electric Gardening Appliances
- UL 2753, the Outline of Investigation for Battery Operated Ride-On Lawn Mowers
- UL 1090, the Standard for Electric Snow Movers
- ANSI/OPEI 60335-2-107, Household and Similar Electrical Appliances – Safety – Part 2-107: Particular Requirements for Robotic Battery Powered Electrical Lawnmowers



Power tool battery testing and certification services

Lithium-ion battery technology has created a growing need for lightweight, compact and longer-running batteries with larger energy density, lower discharge rates and faster charging that can maintain energy density over repeated recharging. Learn more about meeting rigorous regulations for power tool battery safety and performance.



Performance testing

Beyond safety testing, UL Solutions offers performance testing services for energy efficiency, competitive benchmarking, retail and package testing, sustainability testing, UL Marketing Claim Verification and more. Learn more by connecting with us to review your project needs and to learn how we help you differentiate your products in a crowded market.



Robotic lawnmowers

Learn more about robotic lawnmowers and other innovative products as they are being developed. Explore our services for safety testing, assessment and certification services to IEC 60335-2-107 for robotic lawn mowers.



Connected and smart appliances

UL Solutions has committed to focusing on connected tools and appliances and can help build a testing plan to bundle safety, performance and security testing. Learn more about our services for:

- Cybersecurity testing
- Interoperability testing
- Electromagnetic compatibility (EMC), RED and wireless testing, including testing to Bluetooth SIG, Zigbee, Matter and Thread protocols



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