UL 62841-3-1000

STANDARD FOR SAFETY

Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 3-1000: Particular Requirements For Transportable Laser Engravers

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UL Standard for Safety for Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 3-1000: Particular Requirements For Transportable Laser Engravers, UL 62841-3-1000

First Edition, Dated December 31, 2019

Summary of Topics

This reaffirmation of ANSI/UL 62841-3-1000 dated December 3, 2024 is being issued to update the title page to reflect the most recent designation as a Reaffirmed American National Standard (ANS). No technical changes have been made.

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The requirements are substantially in accordance with Proposal(s) on this subject dated October 11, 2024.

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UL 62841-3-1000

Standard for Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 3-1000: Particular Requirements For Transportable Laser Engravers

First Edition

December 31, 2019

This ANSI/UL Standard for Safety consists of the First Edition including revisions through December 3, 2024.

The most recent designation of ANSI/UL 62841-3-1000 as a Reaffirmed American National Standard (ANS) occurred on December 3, 2024. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE at any time. Proposals should be submitted via a Proposal Request in ULSE's Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 3-1000: Particular Requirements For Transportable Laser Engravers

This standard is to be used in conjunction with the First edition of UL 62841-1.

This standard, where stated, amends the requirements of UL 62841-1. Where a particular subclause of UL 62841-1 is not mentioned in UL 62841-3-1000, the UL 62841-1 subclause applies.

1 Scope

This clause of Part 1 is applicable, except as follows:

Addition:

This part of UL 62841 applies to transportable CO_2 **laser engravers** with a laser power not exceeding 60 watts intended to cut, incise a design, engrave, ablate, burn, color, and perform similar processes on material samples inserted into the equipment.

This standard does not apply to fiber **laser engravers** and **laser engravers** intended for industrial use.

2 Normative references

This clause of Part 1 is applicable, except as follows:

Addition:

IEC 60695-11-20:1999, *Fire hazard testing – Part 11-20: Test flames 500 W flame test methods*

(CFR) Title 21, Part 1040, *US Code of Federal Regulations*

3 Terms and definitions

This clause of Part 1 is applicable, except as follows:

3.101 **air assist:** a constant stream of compressed air across the engraving or cutting surface at the point of burn to remove heat and combustible gases from the surface of the material and helps prevent the formation of flames.

3.102 **exhaust system:** a method of removing laser out-gas fumes and odours by a ventilation system connected to the **laser engraver**

3.103 **laser engraver:** tool employing a high intensity beam of light that is intended to cut, incise a design, engrave, ablate, burn, color, and perform similar processes on a variety of material inserted into the equipment.

4 General requirements

This clause of UL 62841-1 is applicable.

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