

<b>STN</b>	<p style="text-align: center;"><b>Snehové frézy</b> <b>Bezpečnostné požiadavky a skúšobné postupy</b> <b>Časť 2: Ručne vedené snehové frézy (ISO 8437-2:</b> <b>2019)</b></p>	<p style="text-align: center;"><b>STN</b> <b>EN ISO 8437-2</b></p>
		27 8340

Snow throwers - Safety requirements and test procedures - Part 2: Pedestrian-controlled snow throwers (ISO 8437-2:2019)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola označená vo Vestníku ÚNMS SR č. 07/21

Obsahuje: EN ISO 8437-2:2021, ISO 8437-2:2019

**132979**

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 8437-2

April 2021

ICS 43.160

English Version

Snow throwers - Safety requirements and test procedures  
- Part 2: Pedestrian-controlled snow throwers (ISO 8437-  
2:2019)

Chasse-neige - Exigences de sécurité et essais - Partie  
2: Chasse-neige à conducteur à pied (ISO 8437-2:2019)

Schneefräsen - Sicherheitsanforderungen und  
Prüfverfahren - Teil 2: Handgeführte Schneefräsen (ISO  
8437-2:2019)

This European Standard was approved by CEN on 9 February 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

**Contents**

Page

<b>European foreword.....</b>	<b>3</b>
-------------------------------	----------

## **European foreword**

This document (EN ISO 8437-2:2021) has been prepared by Technical Committee ISO/TC 23 "Tractors and machinery for agriculture and forestry" in collaboration with Technical Committee CEN/TC 144 "Tractors and machinery for agriculture and forestry" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2021, and conflicting national standards shall be withdrawn at the latest by October 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Endorsement notice**

The text of ISO 8437-2:2019 has been approved by CEN as EN ISO 8437-2:2021 without any modification.

# INTERNATIONAL STANDARD

**ISO  
8437-2**

First edition  
2019-07

# **Snow throwers — Safety requirements and test procedures —**

# Part 2: **Pedestrian-controlled snow throwers**

## *Chasse-neige — Exigences de sécurité et essais — Partie 2: Chasse-neige à conducteur à pied*



Reference number  
ISO 8437-2:2019(E)

© ISO 2019

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

## Contents

	Page
<b>Foreword</b>	<b>iv</b>
<b>Introduction</b>	<b>v</b>
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>2</b>
<b>4 Requirements for pedestrian-controlled snow thrower safety</b>	<b>2</b>
4.1 General	2
4.2 Controls	2
4.2.1 General	2
4.2.2 Engine stopping and starting	5
4.2.3 Collector and impeller control	6
4.2.4 Self-propelled pedestrian-controlled snow throwers	7
4.3 Guards, shields, chutes, deflectors and housings	7
4.3.1 General	7
4.3.2 Hot surfaces	10
4.3.3 Engine exhaust	10
4.3.4 Snow clean-out tool	10
4.4 Fuel	11
4.4.1 Fuel tank overfill test	11
4.4.2 Fuel line axial pull test	11
4.5 Electrical equipment: battery powered circuits (not including magneto grounding circuits)	11
4.5.1 Insulated cables	11
4.5.2 Battery installation	11
4.5.3 Overload protection	11
4.5.4 Terminals and non-insulated electrical parts	11
4.6 Power drives	11
4.7 Probe test	12
4.7.1 Test procedure	12
4.7.2 Test acceptance	12
4.8 Electromagnetic immunity	13
4.9 Noise	13
4.10 Vibration	13
<b>5 Instructions for use</b>	<b>13</b>
5.1 Instruction handbook	13
5.2 Markings	13
5.3 Warnings	13
<b>Annex A (normative) Instruction handbook</b>	<b>14</b>
<b>Bibliography</b>	<b>17</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 13, *Powered lawn and garden equipment*.

This first edition of ISO 8437-2, together with ISO 8437-1, ISO 8437-3 and ISO 8437-4, cancels and replaces ISO 8437:1989, which has been technically revised. It also incorporates the Amendment ISO 8437:1989/Amd.1:1997.

A list of all parts in the ISO 8437 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

The structure of safety standards in the field of machinery is as follows.

- a) Type-A standards (basic standards) give basic concepts, principles for design and general aspects that can be applied to machinery.
- b) Type-B standards (generic safety standards) deal with one or more safety aspects or safeguards that can be used across a wide range of machinery:
  - 1) type-B1 standards on particular safety aspects (e.g. safety distances, surface temperature, noise);
  - 2) type-B2 standards on safeguards (e.g. two-handed controls, interlocking devices, pressure sensitive devices, guards).
- c) Type-C standards (machinery safety standards) deal with detailed safety requirements for a particular machine or group of machines.

This document is a type-C standard as stated in ISO 12100.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organizations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e.g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

When provisions of this type-C standard are different from those which are stated in type-A or type-B standards, the provisions of this type-C standard shall take precedence over the provisions of the other standards for machines that have been designed and built according to the provisions of this type-C standard.



# **Snow throwers — Safety requirements and test procedures —**

## **Part 2: Pedestrian-controlled snow throwers**

### **1 Scope**

This document specifies safety requirements applicable to combustion engine powered pedestrian-controlled snow throwers. It is intended to be used with ISO 8437-1 and ISO 8437-4 to achieve the full requirements and means of verification for pedestrian-controlled snow throwers.

The ISO 8437 series deals with significant hazards, hazardous situations and events relevant to snow throwers used as intended and under the conditions reasonably foreseeable by the manufacturer.

It does not apply to the following:

- electrically powered and battery powered snow throwers;
- hand-held snow throwers;
- airport or highway snow removal machines and equipment;
- machines intended for use in potentially explosive atmospheres.

It does not deal with hazards related to the following:

- battery circuits exceeding 42 V;
- mains connected starting motor;
- magneto grounding circuits;
- working environment;
- electromagnetic compatibility.

The ISO 8437 series is not applicable to machines that were manufactured before the date of its publication.

### **2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3411:2007, *Earth-moving machinery — Physical dimensions of operators and minimum operator space envelope*

ISO 8437-1:2019, *Snow throwers — Safety requirements and test procedures — Part 1: Terminology and common tests*

ISO 8437-4:2019, *Snow throwers — Safety requirements and test procedures — Part 4: Information on national and regional provisions*

ISO 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

**koniec náhľadu – text d'alej pokračuje v platenej verzii STN**