

STN	Stroje a zariadenia na ťažbu a spracovanie prírodného kameňa Bezpečnosť Časť 2: Požiadavky na prenosné diamantové lanové píly	STN EN 15163-2 27 7943
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Machines and installations for the exploitation and processing of natural stone - Safety - Part 2: Requirements for transportable diamond wire saws

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

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Machines and installations for the exploitation and processing of natural stone - Safety - Part 2: Requirements for transportable diamond wire saws

Machines et installations pour l'exploitation et la transformation de la pierre naturelle - Sécurité - Partie 2 : Prescriptions pour les scies à fil diamanté transportables

Maschinen und Anlagen zur Gewinnung und Bearbeitung von Naturstein - Sicherheit - Teil 2: Anforderungen für mobile Diamantseilsägen

This European Standard was approved by CEN on 27 March 2022.

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EN 15163-2:2022 (E)

Contents	Page
European foreword.....	4
Introduction	5
1 Scope.....	6
2 Normative references.....	7
3 Terms and definitions	8
4 Safety requirements and/or protective/risk reduction measures.....	22
4.1 General.....	22
4.2 Controls.....	22
4.2.1 Safety and reliability of control systems	22
4.2.2 Position of controls.....	22
4.2.3 Starting.....	23
4.2.4 Normal stop	24
4.2.5 Emergency stop.....	24
4.2.6 Mode selection	25
4.2.7 Failure of power supply	26
4.3 Protection against mechanical hazards	26
4.3.1 Transport of the machine.....	26
4.3.2 Installation and stability of machine	26
4.3.3 Tool changing	26
4.3.4 Wire tension system.....	27
4.3.5 Safety requirements to minimize risks of whiplash and ejection of parts.....	27
4.3.6 Guarding of transmission parts	32
4.3.7 Requirements for guard materials	33
4.4 Protections against no mechanical hazards.....	33
4.4.1 Fire.....	33
4.4.2 Noise	33
4.4.3 Electrical hazards.....	34
4.4.4 Ergonomics and handling.....	34
4.4.5 Hydraulic and pneumatic components	35
4.4.6 Electromagnetic compatibility	35
4.4.7 Isolation from energy sources.....	35
4.4.8 Lightning	36
4.4.9 Maintenance.....	36
5 Information for use	36
5.1 General.....	36
5.2 Signals and warning devices	36
5.3 Marking, signs and written warnings	36
5.4 Instruction handbook.....	37
5.4.1 General.....	37
5.4.2 Operator's instructions.....	37
5.4.3 Maintenance instructions	39
Annex A (informative) List of significant hazards	41
Annex B (normative) Safety distances for transportable diamond wire saws	43
B.1 Safety distances with belt provided	43

B.2	Safety distances without belt provided	45
Annex C	(normative) Noise test code.....	48
C.1	Introduction.....	48
C.2	Measurement of the A-weighted emission sound pressure level at the operator's positions or other specified positions.....	48
C.2.1	Basic standards	48
C.2.2	Measurement procedure and positions	48
C.2.3	Measurement uncertainty	49
C.3	Determination of A-weighted sound power level	49
C.3.1	Measurement procedure and positions	49
C.3.2	Measurement uncertainty	49
C.4	Installation, mounting and operating conditions for noise emission measurement.....	50
C.5	Information to be recorded and reported	50
C.6	Declaration and verification of noise emission values	53
C.6.1	General	53
C.6.2	Example of a declaration of noise emission values in the instruction handbook for transportable diamond wire saws	54
Annex D	(normative) Rigid guards on transportable diamond wire saws - Impact test method.....	56
D.1	General	56
D.2	Test method	56
D.2.1	Preliminary remarks.....	56
D.2.2	Testing equipment	56
D.2.2.1	General	56
D.2.2.2	Projectiles.....	56
D.2.2.3	Sampling and supporting the guard under test.....	57
D.2.3	Test procedure	57
D.3	Results	57
D.4	Assessment.....	58
D.5	Test report	58
D.6	Example of propulsion device for impact test.....	58
Annex ZA	(informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered.....	59
Bibliography	62

EN 15163-2:2022 (E)

European foreword

This document (EN 15163-2:2022) has been prepared by Technical Committee CEN/TC 151 “Construction equipment and building material machines - Safety”, the secretariat of which is held by DIN.

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 December 2022, and conflicting national standards shall be withdrawn at the latest by December 2022.

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.

This document supersedes EN 15163:2017.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

This document deals with safety requirements of transportable diamond wire saws previously treated in EN 15163:2017 with safety requirements of stationary diamond wire saws, now treated in EN 15163-1:2022. As safety requirements related two types of machines have been separated, this standard edition is completely different from the previous one.

Safety requirements treated in Clause 4, information for use treated in Clause 5 and related annexes have been deeply modified, in addition, the following changes have been introduced:

- list of the significant hazards has been moved from Clause 4 to Annex A, according to 6.10.3.1 of CEN Guide 414;
- normative references have been modified and updated to Clause 2;
- new terms and definitions have been introduced and improved to Clause 3 (e.g. transportable diamond wire saw; coated diamond wire, cutting operations);
- Annex ZA has been modified according to the last edition of CEN Guide 414.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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.

Introduction

This document has been prepared to be a harmonized standard to provide one means of conforming to the essential health and safety requirements of the Machinery Directive and associated EFTA Regulations.

This document is a type-C standard as stated in EN 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 requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

EN 15163-2:2022 (E)

1 Scope

This document deals with all significant hazards, hazardous situations and events which are relevant to transportable diamond wire saws, used in quarries for cutting natural stones (e.g. marble, granite), when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Annex A).

For this document, the intended use of machine is limited by the following cutting operations, defined in Clause 3:

- 1) vertical cut (see 3.16);
 - a) mountain vertical cut (see 3.16.1);
 - b) mountain side vertical cut (see 3.16.2);
 - c) block vertical cut (see 3.16.3);
 - d) overhead underslung vertical cut (see 3.16.4);
- 2) horizontal cut (see 3.17);
 - a) horizontal cut with one side open (see 3.17.1);
 - b) horizontal cut with two sides open (see 3.17.2);
- 3) block inclined cut (see 3.18).

Cutting operations listed above are performed without any path variation (see 3.11).

This document does not deal with any other cutting operation not listed above or defined in Clause 3.

This document deals only with transportable diamond wire saws using coated diamond wire as tool.

This document specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards.

This document deals with all significant hazards that could occur within the expected lifetime of the machinery including the phases of transport, assembly, dismantling, disabling and scrapping.

This document does not deal with the significant hazards arising by the use of other facilities/devices not described in this document, that could be fitted on the machines or that could be used during the work cycle.

This document does not apply to:

- i) machines intended for operation in a potentially explosive atmosphere;
- ii) machines which are manufactured before the date of publication of this document.

2 Normative references

The following referenced documents are indispensable for the application 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.

EN 1005-2:2003+A1:2008, *Safety of machinery — Human physical performance — Part2: Manual handling of machinery and component parts of machinery*

EN 1005-4:2005+A1:2008, *Safety of machinery — Human physical performance — Part4: Evaluation of working postures and movements in relation to machinery*

EN 50370-2:2003, *Electromagnetic compatibility (EMC) — Product family standard for machine tools — Part2: Immunity*

EN 60204-1:2018, *Safety of machinery — Electrical equipment of machines — Part1: General requirements (IEC 60204-1:2016)*

EN 60529:1991,¹ *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)*

EN ISO 3744:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO3744:2010)*

EN ISO 3746:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO3746:2010)*

EN ISO 4413:2010, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO4413:2010)*

EN ISO 4414:2010, *Pneumatic fluid power — General rules and safety requirements for systems and their components (ISO4414:2010)*

EN ISO 4871:2009, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO4871:1996)*

EN ISO 11201:2010, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections (ISO11201:2010)*

EN ISO 11202:2010, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections (ISO11202:2010)*

¹ As impacted by EN 60529:1991/AC:2006-12, EN 60529:1991/A1:2000, EN 60529:1991/A2:2013 and EN 60529:1991/A2:2013/AC:2019-02.

EN 15163-2:2022 (E)

EN ISO 11204:2010, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying accurate environmental corrections (ISO11204:2010)*

EN ISO 11688-1:2009, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part1: Planning (ISO/TR11688-1:1995)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO12100:2010)*

EN 13236:2019, *Safety requirements for superabrasive products*

EN ISO 13849-1:2015, *Safety of machinery — Safety-related parts of control systems — Part1: General principles for design (ISO13849-1:2015)*

EN ISO 13850:2015, *Safety of machinery — Emergency stop function — Principles for design (ISO13850:2015)*

EN ISO 14118:2018, *Safety of machinery — Prevention of unexpected start-up (ISO14118:2017)*

EN ISO 14120:2015, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards (ISO14120:2015)*

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