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**Dodajalna izdelava kovinskih izdelkov - Okolje, zdravje in varnost - 1. del:  
Varnostne zahteve za stroje za spajanje prahu na podlagi z laserskim žarkom  
(PBF-LB) (ISO/ASTM 52938-1:2025)**

Additive manufacturing of metals - Environment, health and safety - Part 1: Safety requirements for PBF-LB machines (ISO/ASTM 52938-1:2025)

Additive Fertigung von Metallen - Umwelt, Gesundheit und Sicherheit - Teil 1: Sicherheitsanforderungen für PBF-LB-Maschinen (ISO/ASTM 52938-1:2025)

Fabrication additive de métaux - Environnement, hygiène et sécurité - Partie 1: Exigences de sécurité pour les machines PBF-LB (ISO/ASTM 52938-1:2025)

**Ta slovenski standard je istoveten z: EN ISO/ASTM 52938-1:2025**

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**ICS:**

13.100	Varnost pri delu. Industrijska higiena	Occupational safety. Industrial hygiene
13.110	Varnost strojev	Safety of machinery
25.030	3D-tiskanje	Additive manufacturing

**SIST EN ISO/ASTM 52938-1:2025**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO/ASTM 52938-1

July 2025

ICS 25.030; 13.100; 13.110

English Version

Additive manufacturing of metals - Environment, health  
and safety - Part 1: Safety requirements for PBF-LB  
machines (ISO/ASTM 52938-1:2025)

Fabrication additive de métaux - Environnement,  
hygiène et sécurité - Partie 1: Exigences de sécurité  
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und Sicherheit - Teil 1: Sicherheitsanforderungen für  
PBF-LB-Maschinen (ISO/ASTM 52938-1:2025)

This European Standard was approved by CEN on 30 May 2025.

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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, Türkiye and United Kingdom.

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

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

**EN ISO/ASTM 52938-1:2025 (E)**

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## European foreword

This document (EN ISO/ASTM 52938-1:2025) has been prepared by Technical Committee ISO/TC 261 "Additive manufacturing" in collaboration with Technical Committee CEN/TC 438 "Additive Manufacturing" 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 January 2026, and conflicting national standards shall be withdrawn at the latest by January 2026.

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 has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

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

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, Türkiye and the United Kingdom.

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## Endorsement notice

The text of ISO/ASTM 52938-1:2025 has been approved by CEN as EN ISO/ASTM 52938-1:2025 without any modification.

## Annex ZA (informative)

### Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered

This European Standard has been prepared under a Commission's standardization request "M/396 Mandate to CEN and CENELEC for Standardisation in the field of machinery" to provide one voluntary means of conforming to essential requirements of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast).

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

**Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2006/42/EC**

The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/ subclause(s) of this EN	Remarks/Notes
1.1.2 (a)	4, 5, 6	
1.1.2. (c)	4, 5, 6	
1.1.2. (d)	4, 5, 6	
1.1.2. (e)	4, 5, 6	
1.1.3. Materials and products	4.11, 4.12	
1.1.5. Design of machinery to facilitate its handling	4.3.1, 4.11, 4.12	
1.1.6. Ergonomics	4.12	
1.2.1. Safety and reliability of control systems	4.2.4, 4.2.4.1, 4.2.4.7, 4.2.4.8, 4.2.4.9, 4.11	
1.2.2. Control devices	4.2.3, 4.2.4, 4.12	
1.2.3. Starting	4.2.4.2	
1.2.4.1. Normal stop	4.2.4.4	
1.2.4.3. Emergency stop	4.2.4.5	
1.2.5. Selection of control or operating modes	4.2.4.1, 4.2.4.7, 4.2.4.8, 4.2.4.9, 4.3.2.1.2, 4.12	
1.2.6. Failure of the power supply	4.2.4.2, 4.14	
1.3.1. Risk of loss of stability	4.3.1	
1.3.7. Risks related to moving parts	4.3.2	