SLOVENSKI STANDARD
SIST EN IEC 61400-4:2025

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Nadomešča:

SIST EN 61400-4:2013

Sistemi za proizvodnjo energije na veter - 4. del: Konstrukcijske zahteve za menjalnike vetrnih turbin (IEC 61400-4:2025)

Wind energy generation systems - Part 4: Design requirements for wind turbine gearboxes (IEC 61400-4:2025)

Windenergieanlagen - Teil 4: Auslegungsanforderungen für Getriebe von Windenergieanlagen (IEC 61400-4:2025)

Systèmes de génération d'énergie éolienne - Partie 4: Exigences de conception des boîtes de vitesses des éoliennes (IEC 61400-4:2025)

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Ta slovenski standard je istoveten z: EN IEC 61400-4:2025

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ICS:

27.180	Vetrne elektrarne	Wind turbine energy systems

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

Wind energy generation systems - Part 4: Design requirements for wind turbine gearboxes (IEC 61400-4:2025)

Systèmes de génération d'énergie éolienne - Partie 4: Exigences de conception des boîtes de vitesses des éoliennes (IEC 61400-4:2025)

Windenergieanlagen - Teil 4: Auslegungsanforderungen für Getriebe von Windenergieanlagen (IEC 61400-4:2025)

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European foreword

The text of document 88/971/CDV, future edition 2 of IEC 61400-4, prepared by TC 88 "Wind energy generation systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61400-4:2025.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2026-05-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-05-31

This document supersedes EN 61400-4:2013 and all of its amendments and corrigenda (if any).

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Endorsement notice

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The text of the International Standard IEC 61400-4:2025 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

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IEC 61400-24	NOTE	Approved as EN IEC 61400-24
ISO 9000	NOTE	Approved as EN ISO 9000

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 61400-1	2019	Wind energy generation systems - Part 1: Design requirements	EN IEC 61400-1	2019
IEC 61400-3-1	-	Wind energy generation systems - Part 3-1: Design requirements for fixed offshore wind turbines	EN IEC 61400-3-1	-
IEC/TS 61400-3-2	-	Wind energy generation systems - Part 3-2: Design requirements for floating offshore wind turbines	-	-
IEC 61400-8	-	Wind energy generation systems - Part 8: Design of wind turbine structural components	EN IEC 61400-8	-
IEC/TS 61400-30	-	Wind energy generation systems - Part 30: Safety of wind turbine generators - General principles for design	-	-
ISO 281	-	Rolling bearings - Dynamic load ratings and rating life	-	-
ISO 683	series	Heat-treatable steels, alloy steels and free-cutting steels	EN ISO 683	series
ISO 683-17	-	Heat-treatable steels, alloy steels and free-cutting steels - Part 17: Ball and roller bearing steels	EN ISO 683-17	-
ISO 898-1	-	Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs with specified property classes - Coarse thread and fine pitch thread	EN ISO 898-1	-
ISO 898-2	-	Fasteners - Mechanical properties of fasteners made of carbon steel and alloy steel - Part 2: Nuts with specified property classes	EN ISO 898-2	-

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Publication	Year	Title	EN/HD	Year
ISO 898-3	-	Mechanical properties of fasteners made of carbon steel and alloy steel - Part 3: Flat washers with specified property classes	EN ISO 898-3	-
ISO 1328-1	-	Cylindrical gears - ISO system of accuracy - Part 1: Definitions and allowable values of deviations relevant to corresponding flanks of gear teeth	-	-
ISO 3104	-	Petroleum products - Transparent and opaque liquids - Determination of kinematic viscosity and calculation of dynamic viscosity	EN ISO 3104	-
ISO 4042	-	Fasteners - Electroplated coating systems	EN ISO 4042	-
ISO 4406	-	Hydraulic fluid power - Fluids - Method for coding the level of contamination by solid particles	-	-
ISO 6336	series	Calculation of load capacity of spur and helical gears	-	-
ISO 6336-1	2019	Calculation of load capacity of spur and helical gears - Part 1: Basic principles, introduction and general influence factors	-	-
ISO 6336-2	2019	Calculation of load capacity of spur and helical gears - Part 2: Calculation of surface durability (pitting)	-	-
ISO 6336-3	2019	Calculation of load capacity of spur and helical gears - Part 3: Calculation of tooth bending strength	-	-
ISO/TS 6336-4	-	Calculation of load capacity of spur and helical gears - Part 4: Calculation of tooth flank fracture load capacity	-	-
ISO 6336-5	2016	Calculation of load capacity of spur and helical gears - Part 5: Strength and quality of materials	-	-
ISO 6336-6	2019	Calculation of load capacity of spur and helical gears - Part 6: Calculation of service life under variable load	-	-
ISO/TS 6336-20	-	Calculation of load capacity of spur and helical gears - Part 20: Calculation of scuffing load capacity - Flash temperature method	-	-
ISO/TS 6336-21	-	Calculation of load capacity of spur and helical gears - Part 21: Calculation of scuffing load capacity - Integral temperature method	-	-
ISO/TS 6336-22	-	Calculation of load capacity of spur and helical gears - Part 22: Calculation of micropitting load capacity	-	-
ISO 6618	-	Petroleum products and lubricants - Determination of acid or base number - Coulour-indicator titration method	-	-

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Publication	Year	Title	EN/HD	Year
ISO 6619	-	Petroleum products and lubricants; neutralization number; potentiometric titration method	-	-
ISO 7146-1	-	Plain bearings - Appearance and characterization of damage to metallic hydrodynamic bearings - Part 1: General	-	-
ISO 8579-1	-	Acceptance code for gear units - Part 1: Test code for airborne sound	-	-
ISO/TR 10064-3	-	Code of inspection practice - Part 3: Recommendations relative to gear blanks, shaft centre distance and parallelism of axes	-	-
ISO 10683	-	Fasteners - Non-electrolytically applied zinc flake coating systems	EN ISO 10683	-
ISO 10825-1	-	Gears - Wear and damage to gear teeth - Part 1: Nomenclature and characteristics	-	-
ISO 12925-1	-	Lubricants, industrial oils and related products (class L) - Family C (Gears) - Part 1: Specifications for lubricants for enclosed gear systems	-	-
ISO 14104	-	Gears - Surface temper etch inspection after grinding	-	-
ISO 14635-1	2023	Gears - FZG test procedures - Part 1: FZG test method A/8,3/90 for relative scuffing load-carrying capacity of oils	-	-
ISO 15243	2017	Rolling bearings - Damage and failures - Terms, characteristics and causes	-	-
ISO 16281	2025	Rolling bearings - Methods for calculating the modified reference rating life for universally loaded rolling bearings	-	-
ISO 17956	2025	Rolling bearings - Method for calculating the effective static safety factor for universally loaded rolling bearings	-	-
ISO 21920-1	-	Geometrical product specifications (GPS) - Surface texture: Profile - Part 1: Indication of surface texture	EN ISO 21920-1	-
ISO 21920-2	-	Geometrical product specifications (GPS) - Surface texture: Profile - Part 2: Terms, definitions and surface texture parameters	EN ISO 21920-2	-
ISO 21920-3	-	Geometrical product specifications (GPS) - Surface texture: Profile - Part 3: Specification operators	EN ISO 21920-3	-
ANSI/AGMA 6001	-	Design and selection of components for enclosed gear drives	-	-
ANSI/AGMA 6123	-	Design manual for enclosed epicyclic gear drives	-	-
ASTM D445	-	Standard test method for kinematic viscosity of transparent and opaque liquids (and calculation of dynamic viscosity)	-	-

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