

STN	Plynové zariadenia Kombinované zariadenia na výrobu tepelnej a elektrickej energie (CHP) s menovitým tepelným príkonom menším alebo rovnajúcim sa 70 kW Zmena A1	STN EN 50465/A1 36 4512
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Gas appliances - Combined heat and power appliance of nominal heat input inferior or equal to 70 kW

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/20

STN EN 50465 zo septembra 2015 sa bez zmeny A1 môže používať do 22. 11. 2022.

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English Version

Gas appliances - Combined heat and power appliance of nominal heat input inferior or equal to 70 kW

Appareils à gaz - Appareils produisant de la chaleur et de l'électricité combinées dont le débit calorifique nominal est inférieur ou égal à 70 kW

Gasgeräte - Geräte zur Kraft-Wärme-Kopplung mit einer Nennwärmebelastung kleiner oder gleich 70 kW

This amendment A1 modifies the European Standard EN 50465:2015; it was approved by CENELEC on 11 February 2019. CEN and CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 and CENELEC member.

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

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EN 50465:2015/A1:2019 (E)**European foreword**

This document (EN 50465:2015/A1:2019) has been prepared by CEN/CLC/JTC 17 "Fuel cell gas appliances".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-05-22
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-11-22

It should be noted that the following changes have been incorporated in this Amendment:

- a) Adoptions to follow the guidelines for developing harmonized standards ("Vademecum on European standardisation in support of Union legislation and policies (*commission staff working document SWD(2015) 205 final*)" have been implemented, e.g. normative references have been updated to dated references all over the standard by revising Clause 2 with dated references, which apply to all normative references throughout the standard text.
- b) Requirements for risk assessment according to the (EU) 2016/426 (GAR) have been introduced to 5.1.
- c) Requirements for the calculation of the "Annual energy consumption" have been introduced.
- d) Additional requirements for sound power level and additional items for marking, installation and operating instructions have been introduced, which are addressed by the 2009/125/EC (ErP).
- e) Additional information for the market surveillance have been introduced (Annex J), which are addressed by the ErP.
- f) An informative Annex K has been introduced, which is giving information for definition and test methods for the "Specific Energy Consumption", it is recommended to be used as a basis for future review of the Energy Labelling Regulation.
- g) Annex ZZA concerning (EU) 2016/426 (GAR) and Annexes ZZB and ZZC concerning regulations 811/2013 and 813/2013 under Directive 2010/30/EU have been introduced.

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

For the relationship with EU Directive(s) see informative Annexes ZZA, ZZB and ZZC, which are an integral part of this document.

1 Modification to the Scope

Replace the first paragraph of the Scope with the following:

This document specifies the requirements and test methods for the construction, safety, fitness for purpose, rational use of energy, sound power measurement and together with requirements for the marking and advice on the end of life disposal of a micro combined heat and power appliance; hereafter referred to as "mCHP appliance".

2 Modification to clause 2, "Normative references"

Replace Clause 2 by the following:

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 This standard uses only dated references as for undated references in the main body of the standard, the version referred to in this clause applies.

EN 88-1:2011+A1:2016, *Pressure regulators and associated safety devices for gas appliances - Part 1: Pressure regulators for inlet pressures up to and including 50 kPa*

EN 125:2010+A1:2015, *Flame supervision devices for gas burning appliances - Thermoelectric flame supervision devices*

EN 126:2012, *Multifunctional controls for gas burning appliances*

EN 161:2011+A3:2013, *Automatic shut-off valves for gas burners and gas appliances*

EN 298:2012, *Automatic burner control systems for burners and appliances burning gaseous or liquid fuels*

EN 437:2003+A1:2009, *Test gases - Test pressures - Appliance categories*

EN 513:1999, *Unplasticized polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors - Determination of the resistance to artificial weathering*

EN 549:1994, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 573-1:2004, *Aluminium and aluminium alloys - Chemical composition and form of wrought products - Part 1: Numerical designation system*

EN 1057:2006+A1:2010, *Copper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 1092-1:2007+A1:2013, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 1: Steel flanges*

EN 1092-2:1997, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 2: Cast iron flanges*

EN 1092-3:2003, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 3: Copper alloy flanges*

EN 1092-3:2003/AC:2007, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 3: Copper alloy flanges*

EN 1092-4:2002, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 4: Aluminium alloy flanges*

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CR 1404:1994, *Determination of emissions from appliances burning gaseous fuels during type-testing*

EN 1561:2011, *Founding - Grey cast irons*

EN 1856-1:2009, *Chimneys - Requirements for metal chimneys - Part 1: System chimney products*

EN 1856-2:2009, *Chimneys - Requirements for metal chimneys - Part 2: Metal flue liners and connecting flue pipes*

EN 10029:2010, *Hot-rolled steel plates 3 mm thick or above - Tolerances on dimensions and shape*

EN 10088-1:2014, *Stainless steels - Part 1: List of stainless steels*

EN 10226-1:2004, *Pipe threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation*

EN 10226-2:2005, *Pipe threads where pressure tight joints are made on the threads - Part 2: Taper external threads and taper internal threads - Dimensions, tolerances and designation*

EN 12067-2:2004, *Gas/air ratio controls for gas burners and gas burning appliances - Part 2: Electronic types*

EN 13203-1:2015, *Gas fired domestic appliances producing hot water - Part 1: Assessment of performance of hot water deliveries*

EN 13216-1:2004, *Chimneys - Test methods for system chimneys - Part 1: General test methods*

EN 13501-1:2007+A1:2009, *Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests*

EN 13611:2015, *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels - General requirements*

EN 13611:2015/AC:2016, *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels - General requirements*

EN 14459:2015, *Safety and control devices for burners and appliances burning gaseous or liquid fuels - Control functions in electronic systems - Methods for classification and assessment*

EN 14471:2013+A1:2015, *Chimneys - System chimneys with plastic flue liners - Requirements and test methods*

EN 15036-1:2006, *Heating boilers - Test regulations for airborne noise emissions from heat generators - Part 1: Airborne noise emissions from heat generators*

EN 50438:2013, *Requirements for micro-generating plants to be connected in parallel with public low-voltage distribution networks*

EN 50549-1:2018, *Requirements for generating plants to be connected in parallel with distribution networks – Part 1: Connection to a LV distribution network – Generating plants up to and including Type B*

EN 50549-2:2018, *Requirements for generating plants to be connected in parallel with distribution networks – Part 2: Connection to a MV distribution network - Generating plants up to and including Type B*

EN 55014-1:2006, *Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission*

EN 55014-1:2006/A1:2009, *Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission*

- EN 55014-1:2006/A2:2011, *Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission*
- EN 55014-2:2015, *Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard*
- EN 60335-1:2012, *Household and similar electrical appliances - Safety - Part 1: General requirements*
- EN 60335-2-102:2016, *Household and similar electrical appliances - Safety - Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections*
- EN 60529:1991, *Degrees of protection provided by enclosures (IP Code)*
- EN 60529:1991/A1:2009, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989/A1:1999)*
- EN 60529:1991/A2:2013, *Degrees of protection provided by enclosures (IP Code)*
- EN 60730-2-9:2010, *Automatic electrical controls for household and similar use - Part 2-9: Particular requirements for temperature sensing controls*
- EN 61000-3-2:2014, *Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*
- EN 61000-3-3:2013, *Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection*
- EN 61000-3-11:2000, *Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection*
- EN 61000-3-12:2011, *Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase*
- EN 61000-6-1:2007, *Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments*
- EN 61000-6-3:2007, *Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments*
- EN 61000-6-3:2007/A1:2011, *Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments*
- EN 62282-3-100:2012, *Fuel cell technologies - Part 3-100: Stationary fuel cell power systems - Safety*
- EN ISO 178:2010, *Plastics - Determination of flexural properties (ISO 178:2010)*
- EN ISO 178:2010/A1:2013, *Plastics - Determination of flexural properties (ISO 178:2010/Amd 1:2013)*
- EN ISO 179-1:2010, *Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test (ISO 179-1:2010)*
- EN ISO 228-1:2003, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*
- EN ISO 527-1:2012, *Plastics - Determination of tensile properties - Part 1: General principles (ISO 527-1:2012)*

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EN ISO 527-2:2012, *Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:2012)*

EN ISO 1183-1:2012, *Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1:2012)*

EN ISO 1183-2:2004, *Plastics - Methods for determining the density of non-cellular plastics - Part 2: Density gradient column method (ISO 1183-2:2004)*

EN ISO 1183-3:1999, *Plastics - Methods for determining the density of non-cellular plastics - Part 3: Gas pycnometer method (ISO 1183-3:1999)*

EN ISO 2553:2013, *Welding and allied processes - Symbolic representation on drawings - Welded joints (ISO 2553:2013)*

EN ISO 3166-1:2014, *Codes for the representation of names of countries and their subdivisions - Part 1: Country codes (ISO 3166-1:2013)*

EN ISO 4063:2010, *Welding and allied processes - Nomenclature of processes and reference numbers (ISO 4063:2009, Corrected version 2010-03-01)*

EN ISO 8256:2004, *Plastics - Determination of tensile-impact strength (ISO 8256:2004)*

EN ISO 9969:2016, *Thermoplastics pipes - Determination of ring stiffness (ISO 9969:2016)*

EN ISO 16852:2016, *Flame arresters - Performance requirements, test methods and limits for use (ISO 16852:2016)*

ISO 7-1:1994, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 37:2017, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 188:2011, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 262:1998, *ISO general purpose metric screw threads — Selected sizes for screws, bolts and nuts*

ISO 815-1:2014, *Rubber, vulcanized or thermoplastic — Determination of compression set — Part 1: At ambient or elevated temperatures*

ISO 815-2:2014, *Rubber, vulcanized or thermoplastic — Determination of compression set — Part 2: At low temperatures*

ISO 857-2:2005, *Welding and allied processes — Vocabulary — Part 2: Soldering and brazing processes and related terms*

ISO 1817:2015, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 2781:2008, *Rubber, vulcanized or thermoplastic — Determination of density*

ISO 6914:2013, *Rubber, vulcanized or thermoplastic — Determination of ageing characteristics by measurement of stress relaxation in tension*

ISO 7619-1:2010, *Rubber, vulcanized or thermoplastic — Determination of indentation hardness — Part 1: Durometer method (Shore hardness)*

ISO 7619-2:2010, *Rubber, vulcanized or thermoplastic — Determination of indentation hardness — Part 2: IRHD pocket meter method*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN