

**Solar supported gas-fired domestic appliances
producing hot water - Appliances not exceeding 70 kW
heat input and 500 liters water storage capacity - Part 3:
Assessment of energy consumption**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13203-3:2010 sisaldab Euroopa standardi EN 13203-3:2010 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 30.09.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 11.08.2010.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13203-3:2010 consists of the English text of the European standard EN 13203-3:2010.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 11.08.2010.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

Solar supported gas-fired domestic appliances producing hot water - Appliances not exceeding 70 kW heat input and 500 litres water storage capacity - Part 3: Assessment of energy consumption

Appareils domestiques produisant de l'eau chaude sanitaire utilisant les combustibles gazeux couplés à un capteur solaire - Appareils de débit calorifique inférieur ou égal à 70 kW et de capacité de stockage inférieure ou égale à 500 litres - Partie 3 : Évaluation de la consommation énergétique

Solar unterstützte gasbeheizte Geräte für die sanitäre Warmwasserbereitung für den Hausgebrauch - Geräte, die eine Nennwärmebelastung von 70 kW und eine Speicherkapazität von 500 Liter Wasser nicht überschreiten - Teil 3: Bewertung des Energieverbrauchs

This European Standard was approved by CEN on 9 July 2010.

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Foreword

This document (EN 13203-3:2010) has been prepared by Technical Committee CEN/TC 109 "Central heating boilers using gaseous fuels", the secretariat of which is held by NEN.

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 February 2011, and conflicting national standards shall be withdrawn at the latest by February 2011.

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1 Scope

This European Standard is applicable to solar supported gas-fired appliances producing domestic hot water. It applies to a system marketed as single unit or a system fully specified by a manufacturer that:

- has a gas heat input not exceeding 70 kW; and
- has a hot water storage capacity not exceeding 500 l; and
- is equipped with at least one solar collector; and
- is, with regard to the solar hydraulic circuit, considered as a forced circulation system (definition according to EN ISO 9488:1999).

The appliances covered by this European Standard are described in Annex C.

This European Standard does not apply to thermo-siphon or integral collector storage systems (definitions according to EN ISO 9488:1999).

NOTE In principle, the energy consumption of thermo-siphon solar preheat systems and integral collector storage preheat systems can also be assessed on the basis of this standard. One appropriate procedure for that purpose is to calculate the temperature level of the domestic hot water withdrawn from the thermal solar system for the reference conditions defined in this standard by using the numerical system model and the thermal solar system performance parameters according to ISO 9459-5. Based on the temperature level of the hot water withdrawn from the store the energy consumption of the gas appliance should be determined. This determination can either be done by means of calculations or by performing a test according to EN 13203-2 and using instead of the cold water inlet temperature the hot water temperature withdrawn from the store.

This standard is not intended to assess the performance:

- of the solar collector(s), which should comply with EN 12975-1 and EN 12975-2; and
- thermal solar systems and components, which should comply with EN 12976-1 and EN 12976-2.

This European Standard, EN 13203-3, sets out a method for assessing the energy performance of a solar supported appliance. It defines a number of daily tapping cycles for each domestic hot water use, kitchen, shower, bath and a combination of these, together with corresponding test procedures including information about the available solar radiation. It enables the energy performances of different gas-fired appliances to be compared and matched to the needs of the user.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12975-1, *Thermal solar systems and components — Solar collectors — Part 1: General requirements*

EN 12975-2, *Thermal solar systems and components — Solar collectors — Part 2: Test methods*

EN 12976-1, *Thermal solar systems and components — Factory made systems — Part 1: General requirements*

EN 12976-2:2006, *Thermal solar systems and components — Factory made systems — Part 2: Test methods*