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**COMMISSION DELEGATED REGULATION (EU) No .../..**

**of **XXX****

**supplementing Directive 2010/30/EU of the European Parliament and of the Council  
with regard to energy labelling of solid fuel boilers and packages of a solid fuel boiler,  
supplementary heaters, temperature controls and solar devices**

(Text with EEA relevance)

**COMMISSION DELEGATED REGULATION (EU) No .../..**

**of XXX**

**supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of solid fuel boilers and packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products<sup>1</sup>, and in particular Article 10 thereof,

Whereas:

- (1) Directive 2010/30/EU requires the Commission to adopt delegated acts on the labelling of energy-related products that have a significant potential for energy savings and a wide disparity in the relevant performance levels with equivalent functionality.
- (2) Space heaters with equivalent functionality including solid fuel boilers exhibit a wide disparity in terms of energy efficiency. The energy solid fuel boilers use to provide indoor spaceheating accounts for a significant share of the total energy demand in the Union. The scope for reducing the energy consumption of solid fuel boilers is significant and includes combining them with appropriate temperature controls and solar devices, and therefore packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices should also be covered by energy labelling requirements.
- (3) Boilers generating heat exclusively for providing hot drinking or sanitary water, boilers for heating gaseous heat transfer media, cogeneration boilers with an electrical capacity of 50 kW or more and non-woody biomass boilers have specific technical characteristics and should therefore be exempted from this Regulation.
- (4) Harmonised provisions on labelling and standard product information regarding the energy efficiency of solid fuel boilers should be laid down in order to provide incentives for manufacturers to improve the energy efficiency of solid fuel boilers, to

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<sup>1</sup> OJ L 153, 18.6.2010, p. 1.

encourage end-users to purchase energy-efficient products and to contribute to the functioning of the internal market.

- (5) In order to provide consumers with comparable information on solid fuel boilers, a labelling scale should be introduced coherent with Commission Delegated Regulation (EU) No ... of ... supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device<sup>2</sup>. Taking the approach applied in that regulation to renewable energy would not promote energy efficiency in biomass boilers. Taking the approach applied to fossil fuels would for biomass not be consistent with the objective of promoting renewable energy under Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources<sup>3</sup>. It is therefore appropriate that this Regulation introduces a specific approach for biomass boilers, a 'biomass label factor' set at such a level that class A+ can be reached by condensing biomass boilers only.
- (6) The combined effect of this Regulation and Commission Regulation (EU) No .../... of ... implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for solid fuel boilers<sup>4</sup> is expected to result in estimated annual energy savings of around 22 petajoules ('PJ') (about 0.5 million tonnes of oil equivalent 'Mtoe') by 2030, with related emission reductions of CO<sub>2</sub> of around 200 kilotonnes ('kt') , compared to the current state of affairs.
- (7) The information provided on the label should be obtained through reliable, accurate and reproducible measurement and calculation procedures which take into account recognised state-of-the-art measurement and calculation methods including, where available, harmonised standards adopted by the European standardisation organisations in accordance with the procedures laid down in Regulation (EU) 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation<sup>5</sup>, for the purpose of establishing ecodesign requirements.
- (8) This Regulation should specify a uniform design and content for the product labels for solid fuel boilers.
- (9) In addition, this Regulation should specify requirements for the product and technical documentation for solid fuel boilers.
- (10) Moreover, this Regulation should specify requirements in respect of the information to be provided in case of any form of distance selling of solid fuel boilers and in any advertisements and technical promotional material for solid fuel boilers.
- (11) Where labels and product information are based on product fiches from suppliers it should be ensured that the end-user has easy access to information on the energy

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<sup>2</sup> OJ L zzz, xx.yy.2013, p. zz.

<sup>3</sup> OJ L 140, 5.6.2009, p. 16.

<sup>4</sup> OJ [...] [...], [...], [...].

<sup>5</sup> OJ L 316, 14.11.2012, p. 12.

performance of packages of a solid fuel boiler combined with supplementary heaters, solar devices and temperature controls.

- (12) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress,

HAS ADOPTED THIS REGULATION:

*Article 1*  
***Subject matter and scope***

1. This Regulation establishes requirements for the energy labelling of and the provision of supplementary product information on solid fuel boilers with a rated heat output of 70 kW or less and packages of a solid fuel boiler with a rated heat output of 70 kW or less, supplementary heaters, temperature controls and solar devices.
2. This Regulation shall not apply to:
  - (a) boilers generating heat only for the purpose of providing hot drinking or sanitary water;
  - (b) boilers for heating and distributing gaseous heat transfer media such as vapour or air;
  - (c) solid fuel cogeneration boilers with a maximum electrical capacity of 50 kW or more;
  - (d) non-woody biomass boilers.

*Article 2*  
***Definitions***

In addition to the definitions set out in Article 2 of Directive 2010/30/EC, the following definitions shall apply for the purposes of this Regulation:

1. ‘solid fuel boiler’ means a device equipped with one or more heat generators that provides heat to a water-based central heating system in order to reach and maintain at a desired level the indoor temperature of one or more enclosed spaces, with a heat loss to its surrounding environment of not more than 6 % of the rated heat output;
2. ‘water-based central heating system’ means a system using water as a heat transfer medium to distribute centrally generated heat to heat emitting devices for the heating of enclosed spaces within buildings or parts thereof, including block heating or district heating networks;
3. ‘solid fuel heat generator’ means the part of a solid fuel boiler that generates the heat through the combustion of solid fuels;
4. ‘rated heat output’ or ‘ $P_r$ ’ means the declared heat output of a solid fuel boiler when providing heating of enclosed spaces with the preferred fuel, expressed in kW;

5. 'solid fuel' means a fuel that is solid at normal indoor room temperatures, including biomass and fossil fuel;
6. 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;
7. 'woody biomass' means biomass originating from trees, bushes and shrubs, including log wood, chipped wood, compressed wood in the form of pellets, compressed wood in the form of briquettes, and sawdust;
8. 'non-woody biomass' means biomass other than woody biomass, including straw, miscanthus, reeds, kernels and grains;
9. 'fossil fuel' means fuel other than biomass, including anthracite, brown coal, coke, bituminous coal and peat;
10. 'biomass boiler' means a solid fuel boiler that uses biomass as the preferred fuel;
11. 'non-woody biomass boiler' means a biomass boiler that uses non-woody biomass as preferred fuel and for which woody biomass or fossil fuel are not listed among its other suitable fuels;
12. 'preferred fuel' means the single solid fuel for which the solid fuel boiler's design was optimised;
13. 'other suitable fuel' means a solid fuel, other than the preferred fuel, for which the boiler is designed, but not optimised, and includes any fuel which can be used in the solid fuel boiler and is mentioned in the instruction manual for installers and end-users, on free access websites of manufacturers, in technical promotional material and in advertisements;
14. 'solid fuel cogeneration boiler' means a solid fuel boiler capable of simultaneously generating heat and electricity in a single process;
15. 'supplementary heater' means a secondary heater or a secondary solid fuel boiler that generates extra heat where the heat demand is greater than the rated heat output of the primary solid fuel boiler;
16. 'heater' means heater as defined in Article 2 of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];
17. 'temperature control' means temperature control as defined in Article 2 of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];

18. 'solar device' means solar device as defined in Article 2 of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];
19. 'solar collector' means solar collector as defined in Article 2 of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];
20. 'hot water storage tank' means hot water storage tank as defined in Article 2 of Commission Regulation (EU) No .../.... of ... supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device<sup>6</sup>;
21. 'package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices' means a package offered to the end-user containing a solid fuel boiler combined with one or more supplementary heaters, one or more temperature controls or one or more solar devices.

For the purposes of Annexes II to VIII, additional definitions are set out in Annex I.

### Article 3

#### ***Responsibilities of suppliers and timetable***

1. From [*date to be inserted: two years after Commission Delegated Regulation (EU) No ... of ... supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device has entered into force*] suppliers placing solid fuel boilers on the market or putting them into service, including those integrated in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, shall ensure that:
  - (a) each solid fuel boiler is provided with a printed label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out in Annex II, and each solid fuel boiler intended for use in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices is provided with a second label in the format and containing the information set out in point 2 of Annex III;
  - (b) a product fiche, in accordance with point 1 of Annex IV, is provided for each solid fuel boiler, and a second fiche, in accordance with point 2 of Annex IV, is provided for each solid fuel boiler intended for use in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

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<sup>6</sup> OJ L zzz, xx.yy.2013, p. zz.

- (c) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the Member States and to the Commission;
  - (d) any advertisement related to a specific solid fuel boiler model and containing energy-related information or price includes a reference to the energy efficiency class of that model;
  - (e) any technical promotional material concerning a specific solid fuel boiler model and describing its specific technical parameters includes a reference to the energy efficiency class of that model;
2. From [*date to be inserted: six years after Commission Delegated Regulation (EU) No ... of ... supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device has entered into force*] suppliers placing solid fuel boilers on the market or putting them into service, including those integrated in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, shall ensure that each solid fuel boiler is provided with a printed label in the format and containing the information set out in point 1.2 of Annex III and conforming to the energy efficiency classes set out in Annex II .
3. From [*date to be inserted: two years after Commission Delegated Regulation (EU) No ... of ... supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device has entered into force*] suppliers placing packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices on the market or putting them into service shall ensure that:
- (a) a printed label in the format and containing the information set out in point 2 of Annex III and conforming to the energy efficiency classes set out in Annex II is provided for each package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices ;
  - (b) a product fiche, accordance with point 2 of Annex IV, is provided for each package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;
  - (c) the technical documentation, in accordance with point 2 of Annex V, is provided on request to the authorities of the Member States and to the Commission;
  - (d) any advertisement relating to a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices and which contains energy-related information or price includes a reference to the energy efficiency class for that model;
  - (e) any technical promotional material concerning a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and

solar devices which describes its specific technical parameters includes a reference to the energy efficiency class for that model.

*Article 4*  
***Responsibilities of dealers***

1. Dealers in solid fuel boilers shall ensure that:
  - (a) each solid fuel boiler bears, at the point of sale, the label provided by suppliers in accordance with Article 3(1) on the outside of the front of the solid fuel boiler, in such a way as to be clearly visible;
  - (b) solid fuel boilers offered for sale, hire or hire purchase, where the end-user cannot be expected to see the product displayed, are marketed with the information provided by the suppliers in accordance with Article 3(1);
  - (c) any advertisement for a specific solid fuel boiler model which contains containing energy-related or price information includes a reference to the energy efficiency class of that model;
  - (d) any technical promotional material concerning a specific solid fuel boiler model which describes its specific technical parameters includes a reference to the energy efficiency class of that model.
  
2. Dealers in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall ensure that:
  - (a) any offer for a specific package includes the energy efficiency class for that package, by displaying on the package the label provided by the supplier in accordance with Article 3(3)(a) and the product fiche provided by the supplier in accordance with Article 3(3)(b), duly filled with the characteristics of that package;
  - (b) packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices offered for sale, hire or hire purchase, where the end-user cannot be expected to see the product displayed, are marketed with the information provided in accordance with point 2 of Annex VI;
  - (c) any advertisement relating to a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar device models and which contains energy-related information or price includes a reference to the energy efficiency class for that model;
  - (d) any technical promotional material concerning a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices which describes its specific technical parameters includes a reference to the energy efficiency class for that model.



*Article 5*  
***Measurement and calculation methods***

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, set out in Annex VII. The energy efficiency index shall be calculated as set out in Annex VIII.

*Article 6*  
***Verification procedure for market surveillance purposes***

Member States shall apply the procedure laid down in Annex IX when assessing the conformity with this Regulation of the declared energy efficiency class of solid fuel boilers and packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices.

*Article 7*  
***Review***

The Commission shall review this Regulation in the light of technological progress no later than *[insert date: date of review of Commission Delegated Regulation (EU) No ... of ... supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device]*.

*Article 8*  
***Entry into force***

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

*For the Commission*  
*The President*  
José Manuel BARROSO

**ANNEX I**  
**Definitions applicable to Annexes II to VIII**

For the purposes of Annexes II to VIII the following definitions shall apply:

- (1) ‘model identifier’ means the code, usually alphanumeric, which distinguishes a specific model comprising a solid fuel boiler or a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices from other models with the same trade mark, supplier’s name or dealer’s name;
- (2) ‘combination boiler’ means a solid fuel boiler that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;
- (3) ‘seasonal space heating energy efficiency’ or ‘ $\bullet_s$ ’ means the ratio between the space heating demand for a designated heating season, supplied by a solid fuel boiler and the annual energy consumption required to meet this demand, expressed in %.
- (4) ‘electrical efficiency’ or ‘ $\bullet_{el}$ ’ means the ratio of the electricity output and the total energy input of a solid fuel cogeneration boiler, expressed in %, whereby the total energy input is expressed in terms of *GCV* or in terms of final energy multiplied by *CC*;
- (5) ‘gross calorific value’ or ‘*GCV*’ means the total amount of heat released by a unit quantity of fuel containing the appropriate moisture level of the fuel as used in solid fuel boilers, when it is burned completely with oxygen, and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of the water vapour formed by the combustion of any hydrogen contained in the fuel;
- (6) ‘conversion coefficient’ or ‘*CC*’ means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council<sup>7</sup>; the value of the conversion coefficient is  $CC = 2.5$ ;
- (7) ‘temperature control fiche’ means the product fiche required to be provided for temperature controls by Article 3(3) of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];
- (8) ‘boiler fiche’ means, for boilers other than solid fuel boilers the product fiche required to be provided for boilers by Article 3(1) of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];

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<sup>7</sup> OJ L 315, 14.11.2012, p. 1.

- (9) ‘solar device fiche’ means the product fiche required to be provided for solar devices by Article 3(4) of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];
- (10) ‘heat pump fiche’ means the product fiche required to be provided for heat pumps by Article 3(1) of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];
- (11) ‘condensing boiler’ means a solid fuel boiler in which, under normal operating conditions and at given operating water temperatures, the water vapour in the combustion products is partially condensed, in order to make use of the latent heat of this water vapour for heating purposes;
- (12) ‘other woody biomass fuel’ means woody biomass other than: log wood with a moisture content of 25 % or less, chipped wood with a moisture content of 15 % or higher, compressed wood, or sawdust with a moisture content equal or less than 50 %;
- (13) ‘other fossil fuel’ means fossil fuel other than bituminous coal, brown coal, coke or anthracite;
- (14) ‘auxiliary electricity consumption’ means the annual electricity required for the designated operation of a solid fuel boiler, excluding electricity consumption from a back-up heater, calculated from the electric power consumption at full load ( $el_{max}$ ), at applicable part load ( $el_{min}$ ), in standby mode and default operating hours at each mode, expressed in kWh in terms of final energy;
- (15) ‘back-up heater’ means a Joule-effect electric resistance element that generates heat only to prevent the solid fuel boiler or the water based central heating system from freezing or when the external heat source is disrupted (including during maintenance periods) or out of order;
- (16) ‘applicable part load’ means for automatically stoked solid fuel boilers, operation at 30 % of rated heat output, and for manually stoked solid fuel boilers that can be operated at 50 % or less of rated heat output, operation at 50 % of rated heat output;
- (17) ‘standby mode power consumption’ or ‘ $P_{SB}$ ’ means the power consumption of a solid fuel boiler in standby mode, expressed in kW;
- (18) ‘standby mode’ means a condition where the solid fuel boiler is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, or information or status display;
- (19) ‘seasonal space heating energy efficiency in active mode’ ( $\bullet_{son}$ ) means

- (a) for automatically stoked solid fuel boilers, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 30% of the rated heat output, expressed in %;
  - (b) for manually stoked solid fuel boilers that can be operated at 50% of the rated heat output in continuous mode, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 50% of the rated heat output, expressed in %;
  - (c) for manually stoked solid fuel boilers that cannot be operated at 50% or less of the rated heat output in continuous mode, the useful efficiency at rated heat output, expressed in %;
  - (d) for solid fuel cogeneration boilers, the useful efficiency at rated heat output, expressed in %;
- (20) ‘useful efficiency’ or ‘•’ means the ratio of the useful heat output and the total energy input of a solid fuel boiler, expressed in %, whereby the total energy input is expressed in terms of *GCV* or in terms of final energy multiplied by *CC*;
  - (21) ‘useful heat output’ or ‘*P*’ means the heat output of a solid fuel boiler transmitted to the heat carrier, expressed in kW;
  - (22) ‘fossil fuel boiler’ means a solid fuel boiler that has fossil fuel as the preferred fuel;
  - (23) ‘gross calorific value moisture free’ or ‘*GCV<sub>mf</sub>*’ means the total amount of heat released by a unit quantity of fuel dried of inherent moisture, when it is burned completely with oxygen, and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of the water vapour formed by the combustion of any hydrogen contained in the fuel;
  - (24) ‘equivalent model’ means a model placed on the market with the same technical parameters set out in Table 4 of point 1 of Annex V, as another model placed on the market by the same manufacturer.

## ANNEX II

### Energy efficiency classes

The energy efficiency class of a solid fuel boiler shall be determined on the basis of its energy efficiency index as set out in Table 1.

The energy efficiency index of a solid fuel boiler shall be calculated in accordance with Annex VIII.

**Table 1:** Energy efficiency classes of solid fuel boilers

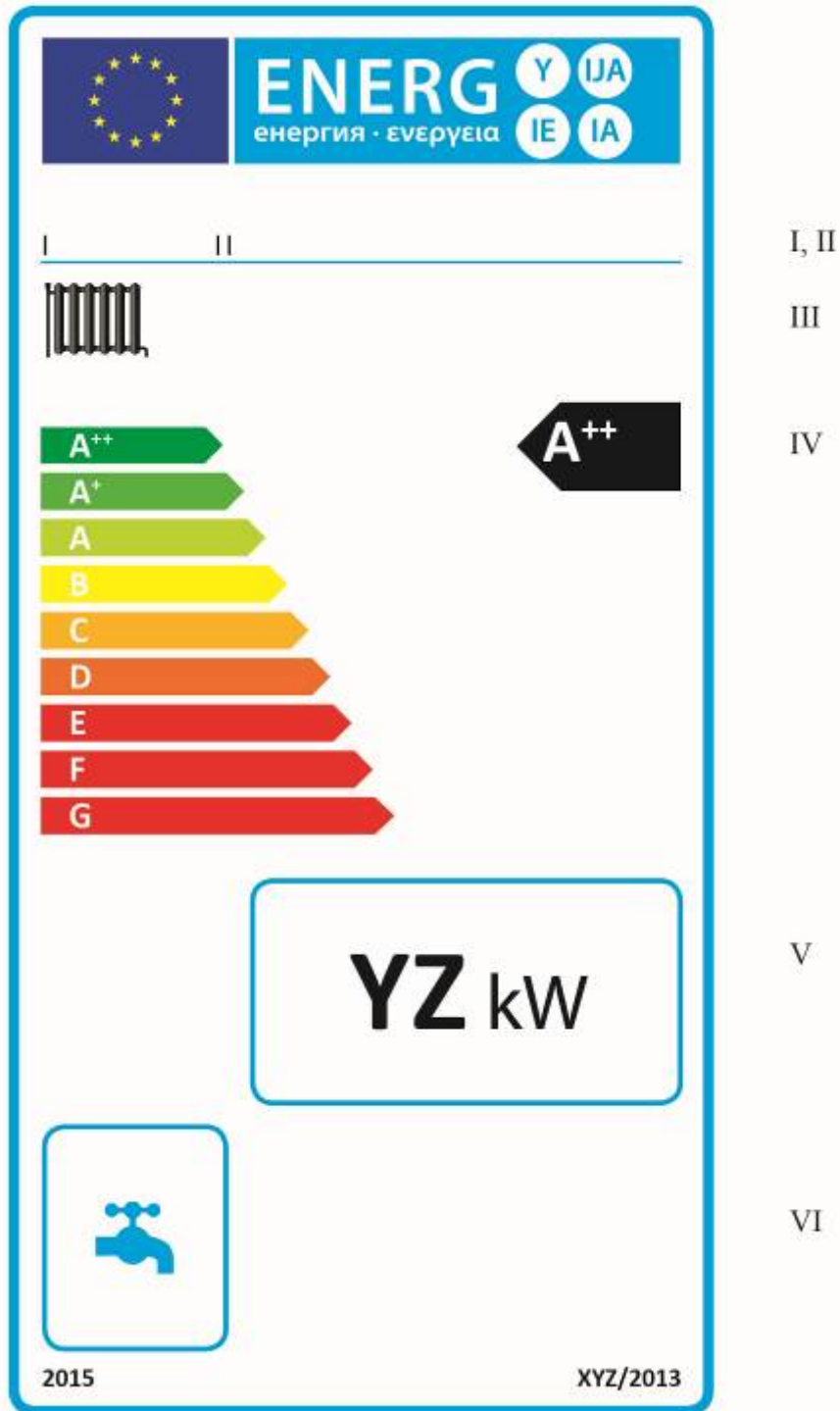
Energy efficiency class	Energy efficiency index ( <i>EEI</i> )
$A^{+++}$	$EEI \leq 150$
$A^{++}$	$125 \cdot EEI < 150$
$A^{+}$	$98 \cdot EEI < 125$
A	$90 \cdot EEI < 98$
B	$82 \cdot EEI < 90$
C	$75 \cdot EEI < 82$
D	$36 \cdot EEI < 75$
E	$34 \cdot EEI < 36$
F	$30 \cdot EEI < 34$
G	$EEI < 30$

**ANNEX III**  
**The labels**

1. Solid fuel boilers

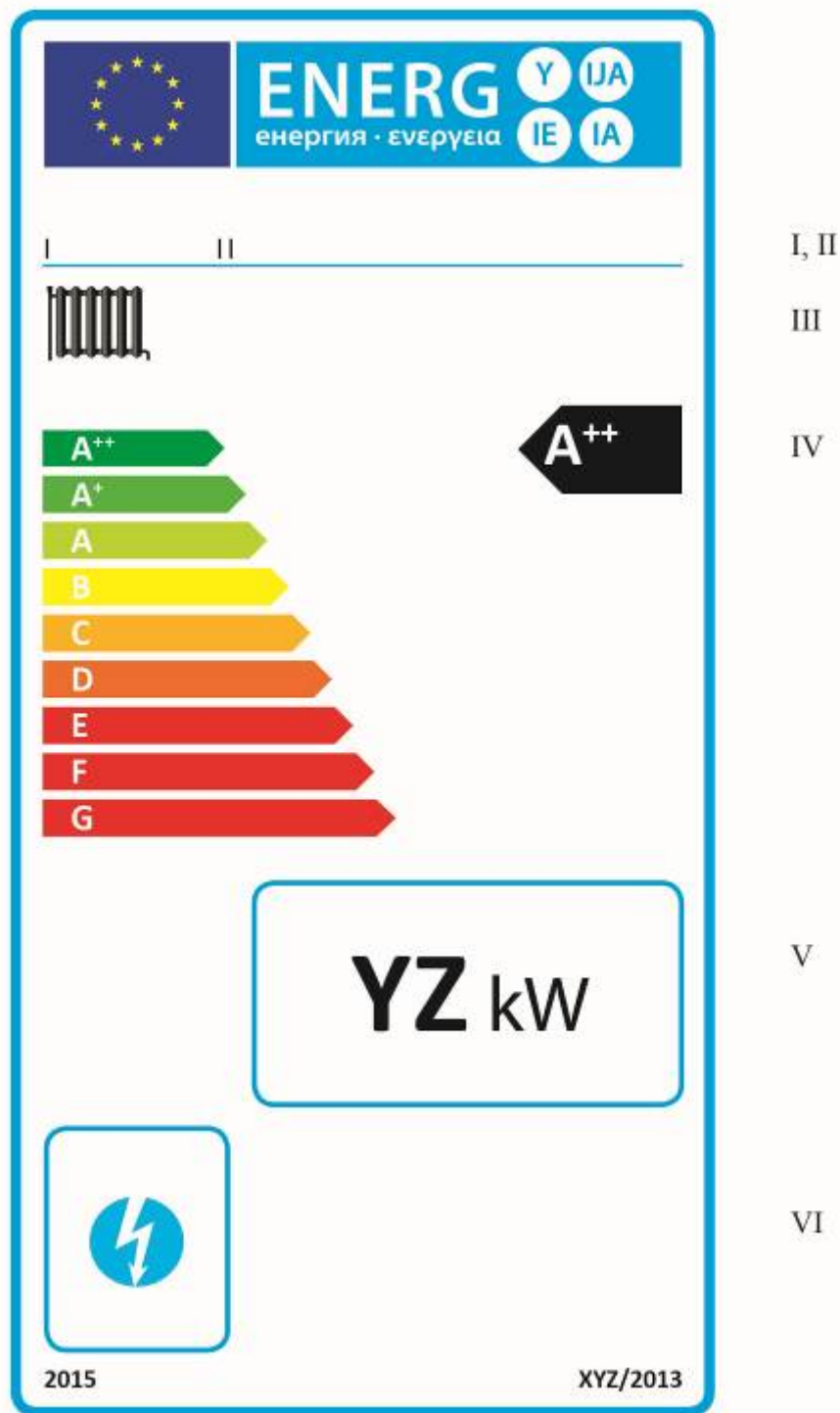
1.1. Label 1

1.1.1. Solid fuel boilers in energy efficiency classes A<sup>++</sup> to G



- (a) The following information shall be included in the label:
- I. supplier's name or trade mark;
  - II. supplier's model identifier;
  - III. the space heating function;
  - IV. the energy efficiency class, determined in accordance with Annex II; the head of the arrow containing the energy efficiency class of the solid fuel boiler shall be placed at the same height as the head of the relevant energy efficiency class;
  - V. the rated heat output in kW, rounded to the nearest integer;
  - VI. for combination boilers, also the water heating function.
- (b) The design aspects of the label for solid fuel boilers shall be in accordance with point 3 of this Annex.

1.1.2. Solid fuel cogeneration boilers in energy efficiency classes A<sup>++</sup> to G



(a) The following information shall be included in the label:

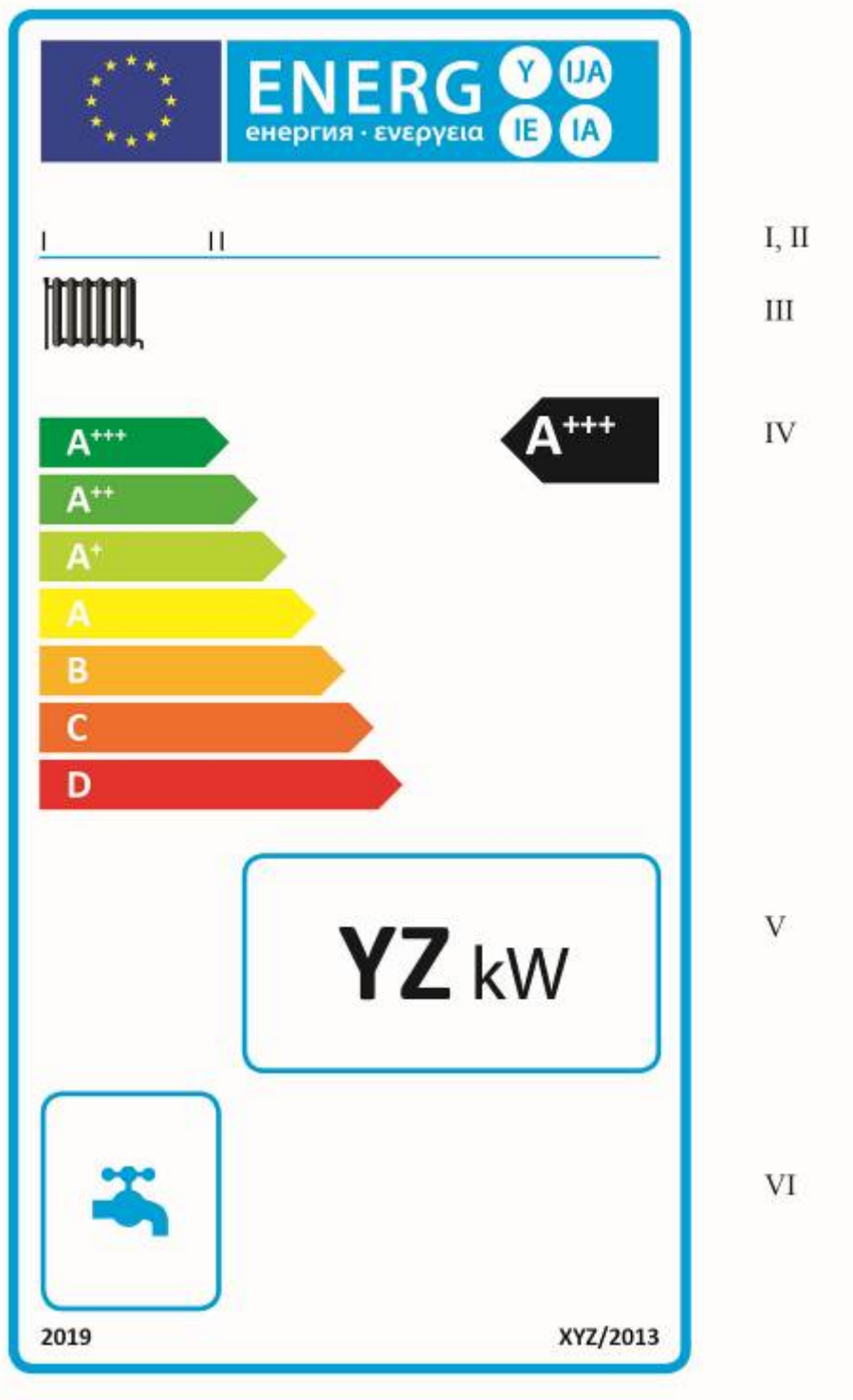
- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the space heating function;



- IV. the energy efficiency class, determined in accordance with Annex II; the head of the arrow containing the energy efficiency class of the solid fuel cogeneration boiler shall be placed at the same height as the head of the relevant energy efficiency class;
  - V. the rated heat output in kW, rounded to the nearest integer;
  - VI. the additional electricity generation function.
- (b) The design aspects of the label for solid fuel cogeneration boilers shall be in accordance with point 4 of this Annex.

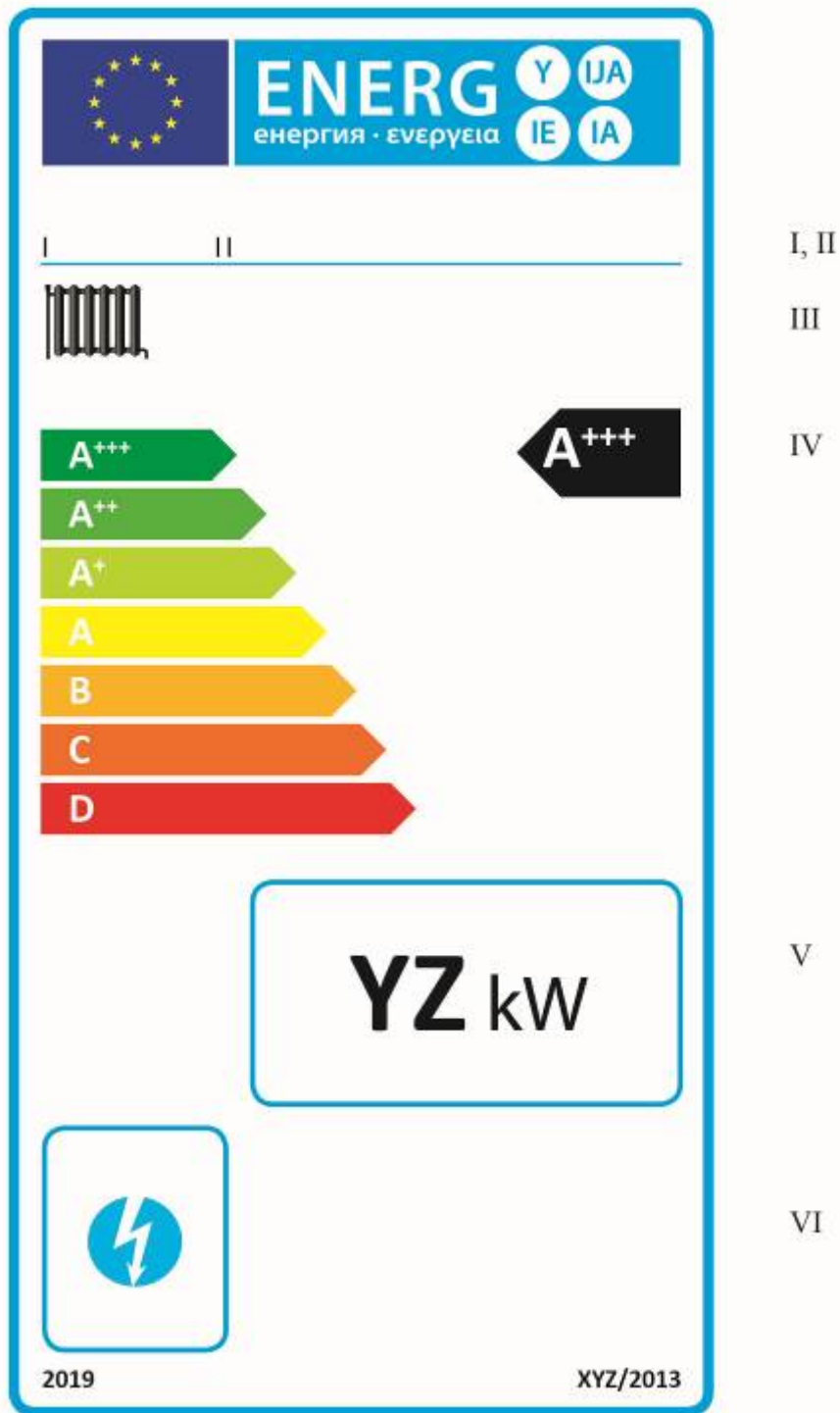
1.2. Label 2

1.2.1. Solid fuel boilers in energy efficiency classes A<sup>+++</sup> to D



- (a) The information listed in point 1.1.1(a) of this Annex shall be included in the label.
- (b) The design aspects of the label for solid fuel boilers shall be in accordance with point 3 of this Annex.

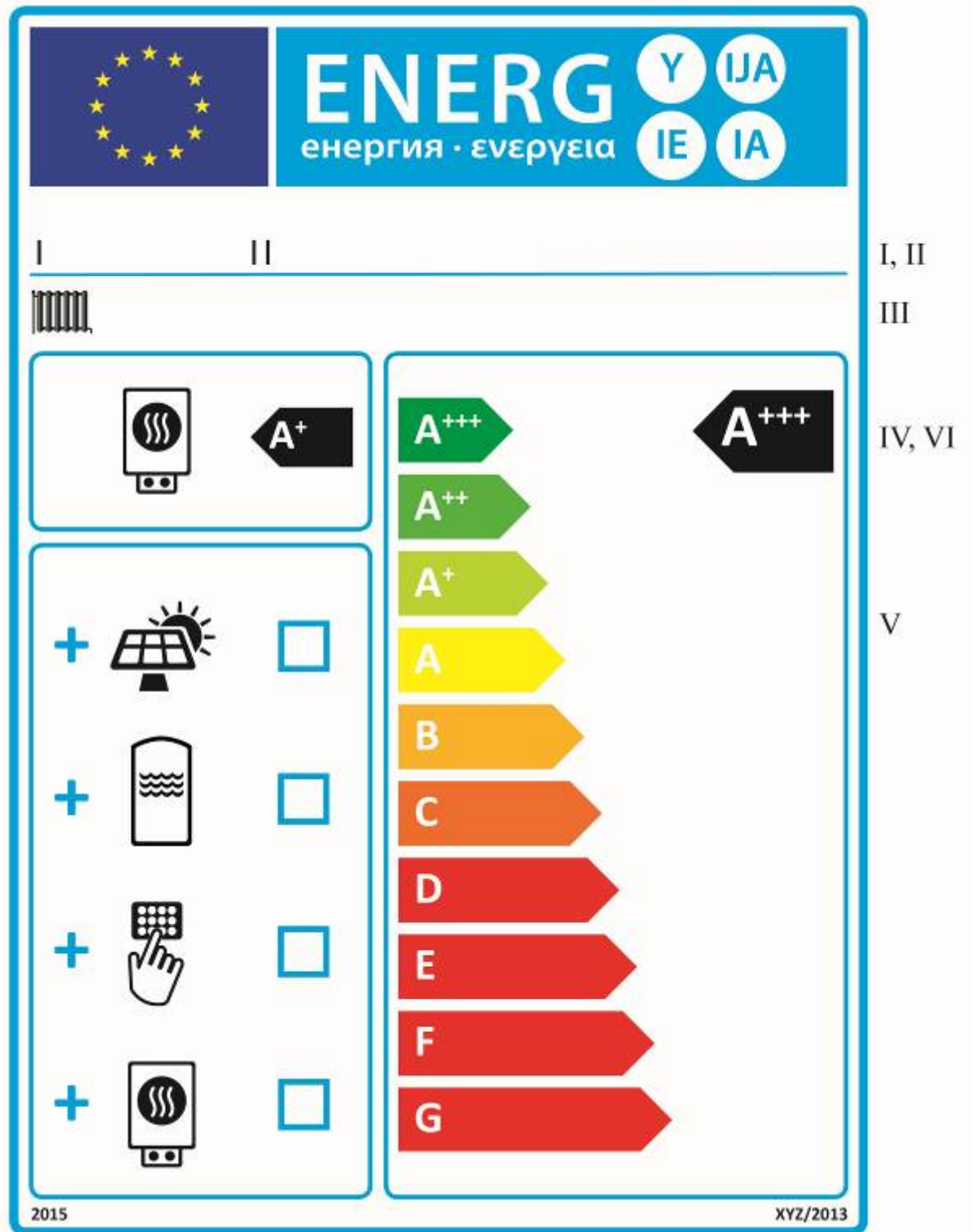
1.2.2. Solid fuel cogeneration boilers in energy efficiency classes A<sup>+++</sup> to D



- (a) The information listed in point 1.1.2(a) of this Annex shall be included in the label.
- (b) The design aspects of the label for cogeneration solid fuel boilers shall be in accordance with point 4 of this Annex.

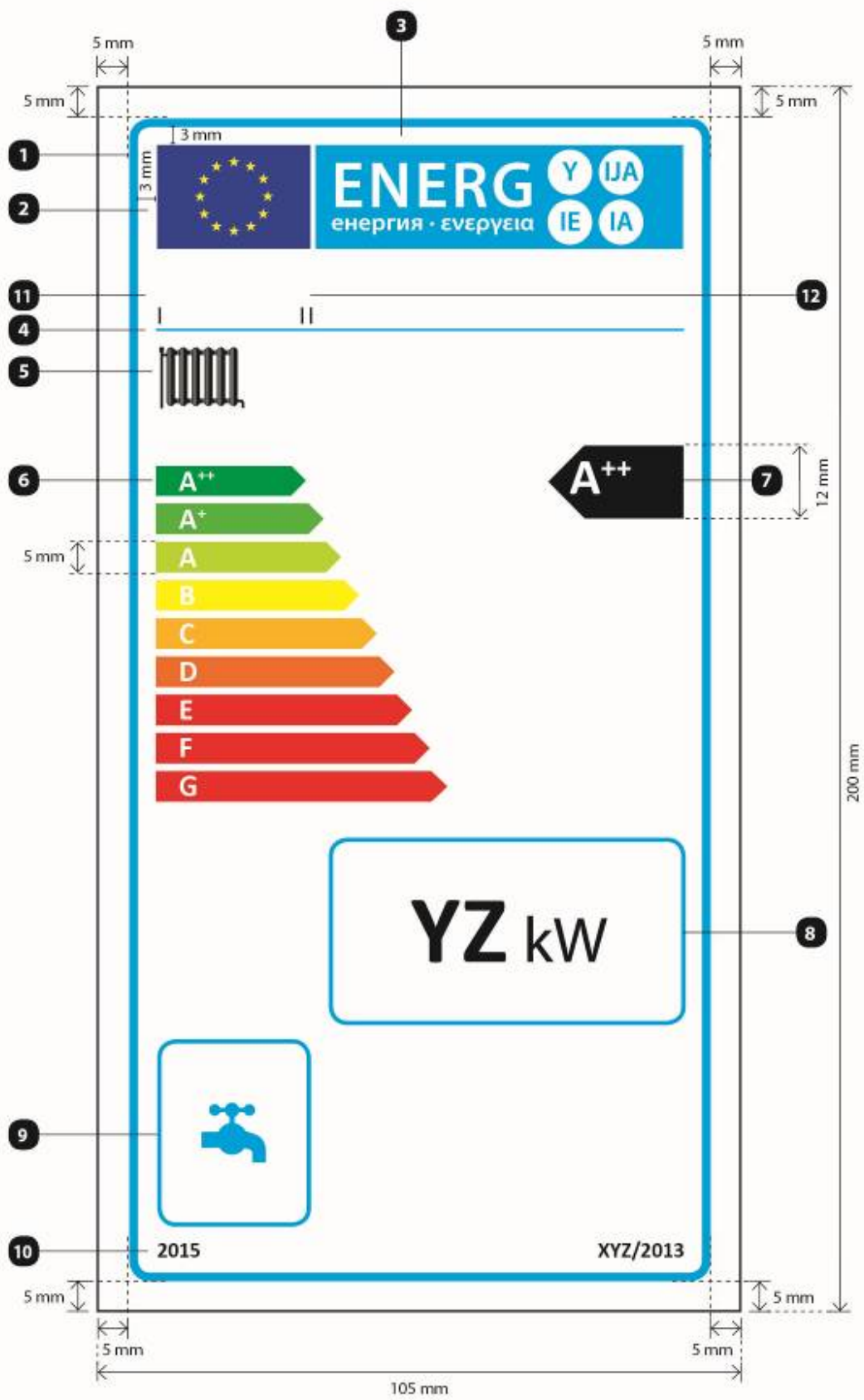
2. Packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices

Label for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices in energy efficiency classes A<sup>+++</sup> to G



- (a) The following information shall be included in the label:
- I. dealer's or supplier's name or trade mark;
  - II. dealer's or supplier's model(s) identifier;
  - III. the space heating function and for combination boilers, the water heating function;
  - IV. the energy efficiency class of the solid fuel boiler, determined in accordance with Annex II;
  - V. indication of whether a solar collector, hot water storage tank, temperature control or supplementary heater may be included in the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;
  - VI. the energy efficiency class of the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, determined in accordance with point 2 of Annex IV; the head of the arrow containing the energy efficiency class of the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall be placed at the same height as the head of the relevant energy efficiency class.
- (b) The design aspects of the label for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall be in accordance with point 5 of this Annex. For packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices in energy efficiency classes A<sup>+++</sup> to D, the classes E to G in the A<sup>+++</sup> to G scale may be omitted.

3. The design of the label for solid fuel boilers shall be the following:



whereby:

- (a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):
- ① **EU label border stroke:** 4 pt, colour: cyan 100%, round corners: 3.5 mm.
  - ② **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
  - ③ **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
  - ④ **Sub-logos border:** 1 pt, colour: cyan 100%, length: 86 mm.
  - ⑤ **Space heating function:**
    - **Pictogram** as depicted.
  - ⑥ **A<sup>++</sup>-G and A<sup>+++</sup>-D scales, respectively:**
    - **Arrow:** height: 5 mm, gap: 1.3 mm, colours:  
Highest class: X-00-X-00,  
Second class: 70-00-X-00,  
Third class: 30-00-X-00,  
Fourth class: 00-00-X-00,  
Fifth class: 00-30-X-00,  
Sixth class: 00-70-X-00,  
Seventh class: 00-X-X-00,  
Eighth class: 00-X-X-00,  
Last class: 00-X-X-00,
    - **Text:** Calibri bold 14 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row;
    - **Arrow:** height: 7 mm, gap: 1 mm, colours:  
Highest class: X-00-X-00,  
Second class: 70-00-X-00,  
Third class: 30-00-X-00,  
Fourth class: 00-00-X-00,  
Fifth class: 00-30-X-00,  
Sixth class: 00-70-X-00,  
Last class: 00-X-X-00,
    - **Text:** Calibri bold 16 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row.



- ⑦ **Energy efficiency class:**
- **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
  - **Text:** Calibri bold 24 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row.

- ⑧ **Rated heat output:**
- **Border:** 2 pt – colour: cyan 100 % – round corners: 3.5 mm,
  - **Value ‘YZ’:** Calibri bold 45 pt, 100 % black,
  - **Text ‘kW’:** Calibri regular 30 pt, 100 % black.

- ⑨ **Water heating function**
- **Pictogram** as depicted,
  - **Border:** 2 pt, colour: cyan 100 %, round corners: 3.5 mm.

- ⑩ **Year of label introduction and number of Regulation:**
- **Text:** Calibri bold 10 pt.

- ⑪ **Supplier’s name or trademark.**

- ⑫ **Supplier’s model identifier:**

The supplier’s name or trade mark and model identifier shall fit in a space of 86 x 12 mm.

4. The design of the label for solid fuel cogeneration boilers shall be the following:



whereby:

- (a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):
  - ❶ **EU label border stroke:** 4 pt, colour: cyan 100%, round corners: 3.5 mm.
  - ❷ **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
  - ❸ **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
  - ❹ **Sub-logos border:** 1 pt, colour: cyan 100%, length: 86 mm.
  - ❺ **Space heating function:**
    - **Pictogram** as depicted.
  - ❻ **A<sup>++</sup>-G and A<sup>+++</sup>-D scales, respectively:**
    - **Arrow:** height: 5 mm, gap: 1.3 mm, colours:  
Highest class: X-00-X-00,  
Second class: 70-00-X-00,  
Third class: 30-00-X-00,  
Fourth class: 00-00-X-00,  
Fifth class: 00-30-X-00,  
Sixth class: 00-70-X-00,  
Seventh class: 00-X-X-00,  
Eighth class: 00-X-X-00,  
Last class: 00-X-X-00,
    - **Text:** Calibri bold 14 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row;
    - **Arrow:** height: 7 mm, gap: 1 mm, colours:  
Highest class: X-00-X-00,  
Second class: 70-00-X-00,  
Third class: 30-00-X-00,  
Fourth class: 00-00-X-00,  
Fifth class: 00-30-X-00,  
Sixth class: 00-70-X-00,  
Last class: 00-X-X-00,

- **Text:** Calibri bold 16 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row.

**7 Energy efficiency class:**

- **Arrow:** width: 22 mm, height: 12 mm, 100% black,
- **Text:** Calibri bold 24 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row.

**8 Rated heat output:**

- **Border:** 2 pt, colour: cyan 100%, round corners: 3.5 mm,
- **Value ‘YZ’:** Calibri bold 45 pt, 100% black,
- **Text ‘kW’:** Calibri regular 30 pt, 100% black.

**9 Electricity function:**

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100%, round corners: 3.5 mm.

**10 Year of label introduction and number of Regulation:**

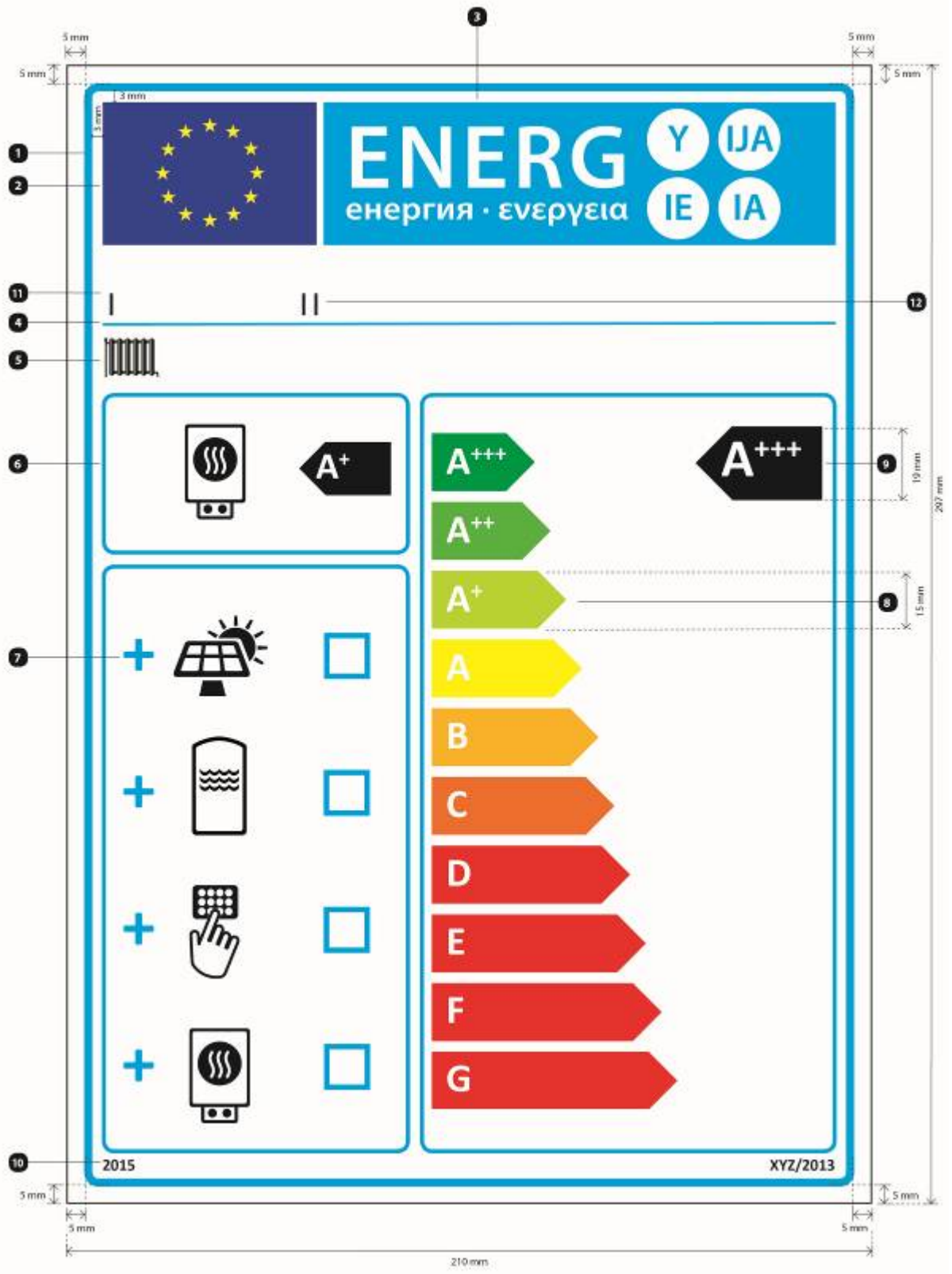
- **Text:** Calibri bold 10 pt.

**11 Supplier’s name or trademark.**

**12 Supplier’s model identifier:**

The supplier’s name or trade mark and model identifier shall fit in a space of 86 x 12 mm.

5. The design of the label for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall be the following:



whereby:

- (a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):
  - ① **EU label border stroke:** 6 pt, colour: cyan 100%, round corners: 3.5 mm.
  - ② **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
  - ③ **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
  - ④ **Sub-logos border:** 2 pt, colour: cyan 100%, length: 191 mm.
  - ⑤ **Space heating function:**
    - **Pictogram** as depicted.
  - ⑥ **Solid fuel boiler:**
    - **Pictogram** as depicted,
    - **Energy efficiency class of solid fuel boiler:**
      - Arrow:** width: 24 mm, height: 14 mm, 100% black;
      - Text:** Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
    - **Border:** 3 pt, colour: cyan 100%, round corners: 3.5 mm.
  - ⑦ **Package with solar collectors, hot water storage tanks, temperature controls or supplementary heaters:**
    - **Pictograms** as depicted,
    - **'+' symbol:** Calibri bold 50 pt, cyan 100%,
    - **Boxes:** width: 12 mm, height: 12 mm, border: 4 pt, cyan 100%,
    - **Border:** 3 pt, colour: cyan 100%, round corners: 3.5 mm.
  - ⑧ **A<sup>+++</sup>-G scale with border:**

- **Arrow:** height: 15 mm, gap: 3 mm, colours:  
Highest class: X-00-X-00,  
Second class: 70-00-X-00,  
Third class: 30-00-X-00,  
Fourth class: 00-00-X-00,  
Fifth class: 00-30-X-00,  
Sixth class: 00-70-X-00,  
Seventh class: 00-X-X-00,  
If applicable, last classes: 00-X-X-00,
- **Text:** Calibri bold 30 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row,
- **Border:** 3 pt, colour: cyan 100%, round corners: 3.5 mm.

**9 Energy efficiency class for the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices:**

- **Arrow:** width: 33 mm, height: 19 mm, 100% black,
- **Text:** Calibri bold 40 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row.

**10 Year of label introduction and number of Regulation:**

- **Text:** Calibri bold 12 pt.

**11 Dealer’s or supplier’s name or trademark.**

**12 Dealer’s or supplier’s model identifier:**

The dealer’s or supplier’s name or trade mark and model identifier shall fit in a space of 191 x 19 mm.



## ANNEX IV Product fiche

1. Solid fuel boilers
  - 1.1. The information in the product fiche of the solid fuel boiler shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:
    - (a) supplier's name or trademark;
    - (b) supplier's model identifier;
    - (c) the energy efficiency class of the model, determined in accordance with Annex II;
    - (d) the rated heat output in kW, rounded to the nearest integer;
    - (e) the energy efficiency index, rounded to the nearest integer and calculated in accordance with Annex VIII;
    - (f) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with Annex VII;
    - (g) any specific precautions that shall be taken when the solid fuel boiler is assembled, installed or maintained;
    - (h) in the case of cogeneration solid fuel boilers the electrical efficiency in %, rounded to the nearest integer;
  - 1.2. One product fiche may cover a number of solid fuel boiler models supplied by the same supplier.
  - 1.3. The information contained in the product fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.
2. Packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices

The fiche for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall contain the information set out in Figure 1 and Figure 2, as appropriate, for evaluating the energy efficiency index of the package offered, including the following information:

  - (a) I: the value of the energy efficiency index of the primary solid fuel boiler;
  - (b) II: the factor for weighting the heat output of primary solid fuel boiler and supplementary heaters of a package as set out in Tables 2 and 3 of this Annex, as appropriate;

- (c) III: the value of the mathematical expression:  $294/(11 \cdot Pr)$ , whereby  $Pr$  refers to the primary solid fuel boiler;
- (d) IV: the value of the mathematical expression  $115/(11 \cdot Pr)$ , whereby  $Pr$  refers to the primary solid fuel boiler.

**Table 2:** Weighting of primary solid fuel boiler and supplementary heaters, for the purposes of Figure 1 of this Annex\*

$P_{sup} / (P_r + P_{sup})^{**}$	II, package without hot water storage tank	II, package with hot water storage tank
0	0	0
0.1	0.30	0.37
0.2	0.55	0.70
0.3	0.75	0.85
0.4	0.85	0.94
0.5	0.95	0.98
0.6	0.98	1.00
• 0.7	1.00	1.00

\* The intermediate values are calculated by linear interpolation between the two adjacent values.

\*\*  $P_r$  refers to the primary solid fuel boiler.

**Table 3:** Weighting of primary cogeneration solid fuel boiler and supplementary heater, for the purposes of Figure 2 of this Annex\*

$P_r / (P_r + P_{sup})^{**}$	II, package without hot water storage tank	II, package with hot water storage tank
0	1.00	1.00
0.1	0.70	0.63
0.2	0.45	0.30
0.3	0.25	0.15
0.4	0.15	0.06
0.5	0.05	0.02
0.6	0.02	0
• 0.7	0	0

\* The intermediate values are calculated by linear interpolation between the two adjacent values.

\*\*  $P_r$  refers to the primary solid fuel boiler.

**Figure 1:** For primary solid fuel boilers, information to be given on the product fiche for a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, indicating the energy efficiency index of the package offered

<b>Energy efficiency index of solid fuel boiler</b>	<b>1</b>	<input type="text" value="'I'"/>																														
Temperature control <i>From temperature control fiche</i>	Class I = 1, Class II = 2, Class III = 1.5, Class IV = 2, Class V = 3, Class VI = 4, Class VII = 3.5, Class VIII = 5	<b>2</b> + <input type="text"/>																														
Supplementary boiler <i>From boiler fiche</i>	Seasonal space heating energy efficiency (in %) or energy efficiency index	<b>3</b> ( <input type="text"/> - 'I' ) x 0.1 = ± <input type="text"/>																														
Solar contribution <i>From solar device fiche</i>	Collector size (in m <sup>2</sup> ) Tank volume (in m <sup>3</sup> ) Collector efficiency (in %) Tank rating A <sup>+</sup> = 0.95, A = 0.91, B = 0.86, C = 0.83, D-G = 0.81	<b>4</b> ( 'III' x <input type="text"/> + 'IV' x <input type="text"/> ) x 0.9 x ( <input type="text"/> / 100 ) x <input type="text"/> = + <input type="text"/>																														
Supplementary heat pump <i>From heat pump fiche</i>	Seasonal space heating energy efficiency (in %)	<b>5</b> ( <input type="text"/> - 'I' ) x 'II' = + <input type="text"/>																														
Solar contribution AND supplementary heat pump <i>Select smaller value</i>		<b>6</b> 0.5 x <input type="text"/> <b>OR</b> 0.5 x <input type="text"/> = - <input type="text"/>																														
Energy efficiency index of package		<b>7</b> <input type="text"/>																														
Energy efficiency class of package	<table border="1"> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>G</b></td> <td><b>F</b></td> <td><b>E</b></td> <td><b>D</b></td> <td><b>C</b></td> <td><b>B</b></td> <td><b>A</b></td> <td><b>A<sup>+</sup></b></td> <td><b>A<sup>++</sup></b></td> <td><b>A<sup>+++</sup></b></td> </tr> <tr> <td>&lt;30</td> <td>≥30</td> <td>≥34</td> <td>≥36</td> <td>≥75</td> <td>≥82</td> <td>≥90</td> <td>≥98</td> <td>≥125</td> <td>≥150</td> </tr> </table>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>G</b>	<b>F</b>	<b>E</b>	<b>D</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>A<sup>+</sup></b>	<b>A<sup>++</sup></b>	<b>A<sup>+++</sup></b>	<30	≥30	≥34	≥36	≥75	≥82	≥90	≥98	≥125	≥150
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																							
<b>G</b>	<b>F</b>	<b>E</b>	<b>D</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>A<sup>+</sup></b>	<b>A<sup>++</sup></b>	<b>A<sup>+++</sup></b>																							
<30	≥30	≥34	≥36	≥75	≥82	≥90	≥98	≥125	≥150																							

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*The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.*

**Figure 2:** For primary solid fuel cogeneration boilers, information to be given on the product fiche for a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, indicating the energy efficiency index of the package offered

**Energy efficiency index of solid fuel cogeneration boiler** ①

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Temperature control ②  
*From temperature control fiche* +

Class I = 1, Class II = 2, Class III = 1.5,  
 Class IV = 2, Class V = 3, Class VI = 4,  
 Class VII = 3.5, Class VIII = 5

---

Supplementary boiler ③  
*From boiler fiche* -

Seasonal space heating energy efficiency (in %) or energy efficiency index  
 (  - 'I' ) x 'II' =

---

Solar contribution ④  
*From solar device fiche* +

Collector size (in m<sup>2</sup>)

Tank volume (in m<sup>3</sup>)

Collector efficiency (in %)

Tank rating  
A\* = 0.95, A = 0.91,  
B = 0.86, C = 0.83,  
D-G = 0.81

( 'III' x  + 'IV' x  ) x 0.7 x (  / 100 ) x  =

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Energy efficiency index of package ⑤

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Energy efficiency class of package

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>G</b>	<b>F</b>	<b>E</b>	<b>D</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>A*</b>	<b>A**</b>	<b>A***</b>
<30	≥30	≥34	≥36	≥75	≥82	≥90	≥98	≥125	≥150

*The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.*

**ANNEX V**  
**Technical documentation**

1. Solid fuel boilers

For solid fuel boilers, the technical documentation referred to in Article 3(1)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the solid fuel boiler model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the name and signature of the person empowered to bind the supplier;
- (f) the technical parameters set out in Table 4, measured and calculated in accordance with Annex VII and VIII;
- (g) any specific precautions that must be taken when the solid fuel boiler is assembled, installed or maintained.

This information may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC.

**Table 4:** Technical parameters for solid fuel boilers and solid fuel cogeneration boilers

Model(s): [information identifying the model(s) to which the information relates]							
Stoking mode: [Manual: the boiler must be operated with a hot water storage tank of a volume of at least x* litre / Automatic: it is recommended that the boiler be operated with a hot water storage tank of a volume of at least x** litre]							
Condensing boiler: [yes/no]							
Solid fuel cogeneration boiler: [yes/no]				Combination boiler: [yes/no]			
<b>Fuel</b>	<b>Preferred fuel (only one):</b>	<b>Other suitable fuel(s):</b>	<b>•<sub>s</sub> [%]:</b>				
Log wood, moisture content • 25 %	[yes/no]	[yes/no]					
Chipped wood, moisture content 15-35 %	[yes/no]	[yes/no]					
Chipped wood, moisture content > 35 %	[yes/no]	[yes/no]					
Compressed wood	[yes/no]	[yes/no]					
Sawdust, moisture content • 50 %	[yes/no]	[yes/no]					
Other woody biomass	[yes/no]	[yes/no]					
Non-woody biomass	[yes/no]	[yes/no]					
Bituminous coal	[yes/no]	[yes/no]					
Brown coal	[yes/no]	[yes/no]					
Coke	[yes/no]	[yes/no]					
Anthracite	[yes/no]	[yes/no]					
Other fossil fuel	[yes/no]	[yes/no]					
<b>Characteristics when operating with the preferred fuel only:</b>							
Energy efficiency index <i>EEI</i> :							
<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>	<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>
Useful heat output				Useful efficiency			
At rated heat output	$P_n$ ***	x,x	kW	At rated heat output	• <sub>n</sub>	x,x	%
At [30 %/50 %] of rated heat output, if applicable	$P_p$	[x,x/ N.A.]	kW	At [30 %/50 %] of rated heat output, if applicable	• <sub>p</sub>	[x,x/ N.A.]	%
For solid fuel cogeneration boilers: Electrical efficiency				<b>Auxiliary electricity consumption</b>			
At rated heat output	• <sub>el,n</sub>	x,x	%	At rated heat output	$el_{max}$	x,x	kW
				At [30 %/50 %] of rated heat output, if applicable	$el_{min}$	[x,x/ N.A.]	kW
				In standby mode	$P_{SB}$	x,xxx	kW
Contact details		Name and address of the manufacturer or its authorised representative					
* Tank volume = $45 * P_r * (1 - 2.7 / P_r)$ or 300 litres whichever is higher, with $P_r$ indicated in kW							
** Tank volume = $20 * P_r$ with $P_r$ indicated in kW							
*** For the preferred fuel $P_n$ equals $P_r$							



2. Packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices

For packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, the technical documentation referred to in Article 3(2)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the model comprising the package of a solid fuel boiler, supplementary heaters, temperatures control and solar devices sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the name and signature of the person empowered to bind the supplier;
- (f) technical parameters:
  - (1) the energy efficiency index, rounded to the nearest integer;
  - (2) the technical parameters set out in point 1 of this Annex;
  - (3) the technical parameters set out in points 3 and 4 of Annex V of Commission Regulation (EU) No .../.... [supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device];
- (g) any specific precautions that must be taken when the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices is assembled, installed or maintained.

## ANNEX VI

### Information to be provided in cases where end-users cannot be expected to see the product displayed

1. Solid fuel boilers
  - 1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:
    - (a) the energy efficiency class of the model, determined in accordance with Annex II;
    - (b) the rated heat output in kW, rounded to the nearest integer;
    - (c) the energy efficiency index, rounded to the nearest integer and calculated in accordance with Annex VIII;
    - (d) in the case of solid fuel cogeneration boilers the electrical efficiency in %, rounded to the nearest integer.
  - 1.2. The size and font in which the information referred in point 1.1 is printed or shown shall be legible.
2. Packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices
  - 2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:
    - (a) the energy efficiency class of the model, determined in accordance with Annex II;
    - (b) the energy efficiency index, rounded to the nearest integer;
    - (c) the information set out in Figure 1 and Figure 2 of Annex IV, as appropriate.
  - 2.2. The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

**ANNEX VII**  
**Measurements and calculations**

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 5.
2. General conditions for measurements and calculations
  - (a) Solid fuel boilers shall be tested for the preferred fuel in order to determine the rated heat output and the seasonal space heating energy efficiency.
  - (b) Declared values for the rated heat output and the seasonal space heating energy efficiency shall be rounded to the nearest integer.
3. General conditions for the seasonal space heating energy efficiency of solid fuel boilers
  - (a) The useful efficiency values  $\eta_n, \eta_p$  and the useful heat output values  $P_n, P_p$  shall be measured, where applicable. For solid fuel cogeneration boilers the electrical efficiency value  $\eta_{el,n}$  is also measured.
  - (b) The seasonal space heating energy efficiency  $\eta_s$  shall be calculated as the seasonal space heating energy efficiency in active mode  $\eta_{son}$ , corrected by contributions accounting for temperature controls, auxiliary electricity consumption, and, for cogeneration space heaters, by adding the electrical efficiency multiplied by a conversion coefficient  $CC$  of 2.5;
  - (c) The consumption of electricity shall be multiplied by a conversion coefficient  $CC$  of 2.5.
4. Specific conditions for the seasonal space heating energy efficiency of solid fuel boilers
  - (a) Seasonal space heating energy efficiency  $\eta_s$  is defined as:  
$$\eta_s = \eta_{son} - F(1) - F(2) + F(3)$$

where:

    - (1)  $\eta_{son}$  is the seasonal space heating energy efficiency in active mode, expressed as a percentage, calculated as set out in point 4(b);
    - (2)  $F(1)$  accounts for a loss of seasonal space heating energy efficiency; for solid fuel boilers the correction is  $F(1) = 3\%$ ;

- (3)  $F(2)$  accounts for a negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption, expressed as a percentage, and is calculated as set out in point 4(c);
- (4)  $F(3)$  accounts for a positive contribution to the seasonal space heating energy efficiency by the electrical efficiency of solid fuel cogeneration boilers, expressed as a percentage, and is calculated as follows:

$$F(3) = 2.5 \cdot \cdot_{el,n}$$

- (b) the seasonal space heating energy efficiency in active mode,  $\cdot_{son}$ , is calculated as follows:

- (1) for manually stoked solid fuel boilers that can be operated at 50 % of the rated heat output in continuous mode, and for automatically stoked solid fuel boilers:

$$\cdot_{son} = 0.85 \cdot \cdot_p + 0.15 \cdot \cdot_n$$

- (2) for manually stoked solid fuel boilers that cannot be operated at 50 % or less of the rated heat output in continuous mode, and for solid fuel cogeneration boilers:

$$\cdot_{son} = \cdot_n$$

- (c)  $F(2)$  is calculated as follows:

- (1) for manually stoked solid fuel boilers that can be operated at 50 % of the rated heat output in continuous mode, and for automatically stoked solid fuel boilers:

$$F(2) = 2.5 \cdot (0.15 \cdot el_{max} + 0.85 \cdot el_{min} + 1.3 \cdot P_{SB}) / (0.15 \cdot P_n + 0.85 \cdot P_p)$$

- (2) for manually stoked solid fuel boilers that cannot be operated at 50 % or less of the rated heat output in continuous mode, and for solid fuel cogeneration boilers:

$$F(2) = 2.5 \cdot (el_{max} + 1.3 \cdot P_{SB}) / P_n$$

## 5. Calculation of gross calorific value

The gross calorific value ( $GCV$ ) shall be obtained from the gross calorific value moisture free ( $GCV_{mf}$ ) by the applying the following conversion:

$$GCV = GCV_{mf} \times (1 - M)$$

where:

- (a)  $GCV$  and  $GCV_{mf}$  are expressed in megajoules per kilogram;
- (b)  $M$  is the moisture content of the fuel, as used in solid fuel boilers, as a proportion of the total mass of the fuel.

## ANNEX VIII

### Method for calculating the Energy Efficiency Index

The Energy Efficiency Index (*EEI*) of solid fuel boilers shall be calculated for the preferred fuel and rounded to the nearest integer as:

$$EEI = \bullet_{son} \bullet BLF - F(1) - F(2) + F(3)$$

where:

- (a)  $\bullet_{son}$  is the seasonal space heating energy efficiency in active mode, expressed as a percentage, calculated as set out in point 4(b) of Annex VII;
- (b) *BLF* is the biomass label factor, which is 1.15 for biomass boilers and 1 for fossil fuel boilers;
- (c) *F(1)* accounts for a negative contribution to the energy efficiency index; for solid fuel boilers and solid fuel cogeneration boilers the correction is  $F(1) = 3$ ;
- (d) *F(2)* accounts for a negative contribution to the energy efficiency index by auxiliary electricity consumption, expressed as a percentage, and is calculated as set out in point 4(c) of Annex VII;
- (e) *F(3)* accounts for a positive contribution to the energy efficiency index by the electrical efficiency of solid fuel cogeneration boilers, expressed as a percentage, and is calculated as follows:
- (f)  $F(3) = 2.5 \bullet \bullet_{el,n}$

## **ANNEX IX**

### **Verification procedure for market surveillance purposes**

For the purposes of assessing conformity with the requirements laid down in Articles 3 and 4, the authorities of the Member States shall apply the following verification procedure:

1. The Member State authorities shall test one single unit per solid fuel boiler and package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices.
2. The model shall be considered to comply with the applicable requirements if:
  - (a) the values and classes on the label and in the product fiche correspond to the values in the technical documentation; and
  - (b) the energy efficiency index is not more than 4% lower than the declared value of the unit.
3. If the result referred to in point 2(a) is not achieved, the model and all other equivalent models shall be considered not to comply with this Regulation. If the result referred to in point 2(b) is not achieved, the Member State authorities shall randomly select three additional units of the same model for testing.
4. The model shall be considered to comply with the applicable requirements if the average of the three units for the energy efficiency index is not more than 4% lower than the declared value of the unit.
5. If the results referred to in point 4 are not achieved, the model and all other equivalent models shall be considered not to comply with this Regulation. The Member State authorities shall provide the test results and other relevant information to the authorities of the other Member States and to the Commission within one month of taking the decision on non-compliance of the model.

Member State authorities shall use the measurement and calculation methods set out in Annex VII and VIII.

The verification tolerances set out in point 2(b) and point 4 of this Annex relate only to the verification of the measured parameters by Member State authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.