

## **Document 9**

### **WORKING DOCUMENT on possible energy labelling requirements (pursuant to Directive 92/75/EEC) for boilers**

#### **Introduction**

The examples given in this working document are indicative only to facilitate a discussion on labelling, pending further discussions on labelling with the European Parliament and the Council.

#### **Scope**

Labelling requirements are mandatory for Boilers up to a maximum heat input of [70] kW, where 'heat input' is intended as equivalent gross calorific value (Hs) of the hourly fossil fuel consumption or - in the absence of fossil fuel consumption - the electric power input for heat production, in accordance with the technical definitions in document 3.

For labelling of boilers between [70] and [400] kW additional profiles could be added, i.e. at Pdesign 90, 135, 202, 303 kW, denominated 5XL, 6XL, 7XL, 8XL.

#### **Additional information**

This text focuses on labelling of the product when placed on the market.

For promoting energy efficiency it may be desirable not only to label the product with a sticker when it is placed on the market, but also to have a metal plate or a sticker fixed on the installed product by the dealer with the exact class applicable to the heat load of the building. This will indicate clearly to the consumer what class the purchased product is in his situation. It may also be useful when the original consumer moves or for purposes of energy audits and EPBD implementations.

#### **Labelling requirements**

The specific energy label requirements for the products covered are set out below.

## 1. CLASS LIMITS

**Boilers** < [70] kW maximum heat input, space heating, energy label lower class limits:

**Table III.1. Boiler space heating, energy label lower class limits in % etas**

???	??	?	A	B	C	D	E	F	G
119	103	87	79	71	64	56	48	40	34

Note that 'A' class is intended for the best conventional products. Classes ? to ??? are reserved to have a minimum differentiation between configurations with solar energy and/or heat pumps and/or cogeneration, which will not be in everybody's reach.

Combi-boilers, water heating, energy label lower class limits:

**Table III.2. Combi-boiler water heating, energy label lower class limits in % etawh**

	XXS	XS	S	M	L	XL	XXL	3XL	4XL
???	53	61	72	80	98	112	124	140	150
??	44	53	55	66	82	92	104	110	120
?	35	38	38	54	68	76	84	96	96
A	32	35	35	45	56	62	72	80	86
B	29	32	32	39	46	50	60	64	64
C	26	29	29	36	37	40	40	40	40
D	23	26	26	33	34	34	36	36	36
E	20	23	23	30	30	30	32	32	32
F	17	20	20	27	27	27	28	28	28
G	14	17	17	24	24	24	24	24	24

Note that 'A' class is intended for the best conventional products. Classes ? to ??? are reserved to have a minimum differentiation between boiler configurations with solar energy and/or heat pumps and/or cogeneration, which will not be in everybody's reach.

## Cylinders

**Table III.3. Cylinders , energy label lower class limits in standing loss S in W \***

	Standing loss S
A	0,65 x (10+0,25 V)
B	10+0,25 V
C	20+0,25 V
D	30+0,25 V
E	40+0,25 V
F	50+0,25 V
G	60+0,25 V

\*=cylinders with 2 or 3 heat exchangers shall have a bonus of 1 or 2 efficiency classes.

Denomination of the rows/ classes is to be decided, current indications are provisional and taken from the preparatory study whereby 'A' is intended for the best conventional (gas/oil/electric) boiler and '???' is the best boiler using (also) renewable energy resources.

## **2. ENERGY LABEL INFORMATION REQUIREMENTS (INDICATIVE, FOR DISCUSSION PURPOSES)**

**The Label for Boiler space heating** (see attached illustration) shall include the following information:

- 1) Manufacturer à header information
- 2) Model identification à header information
- 3) Energy efficiency rating à numerical & arrow for energy class
- 4) Function (hydronic space heating) à icon
- 5) Main energy source (fossil or electric) à icon
- 6) Load profile(s) à classification acronym (XS-S-M-L etc.)
- 7) Where more than one Load Profile is declared (or climate type) the rating for the largest Load profile declared shall be included in the main rating scale with smaller ratings shown as subsidiary information.
- 8) In case of SOL or air-source HP being part of the product-configuration, the energy efficiency rating for the designated climates and the largest Load Profile shall be shown as subsidiary information.

**The Label for Combi-boiler water heating** (see attached illustration) shall include the following information:

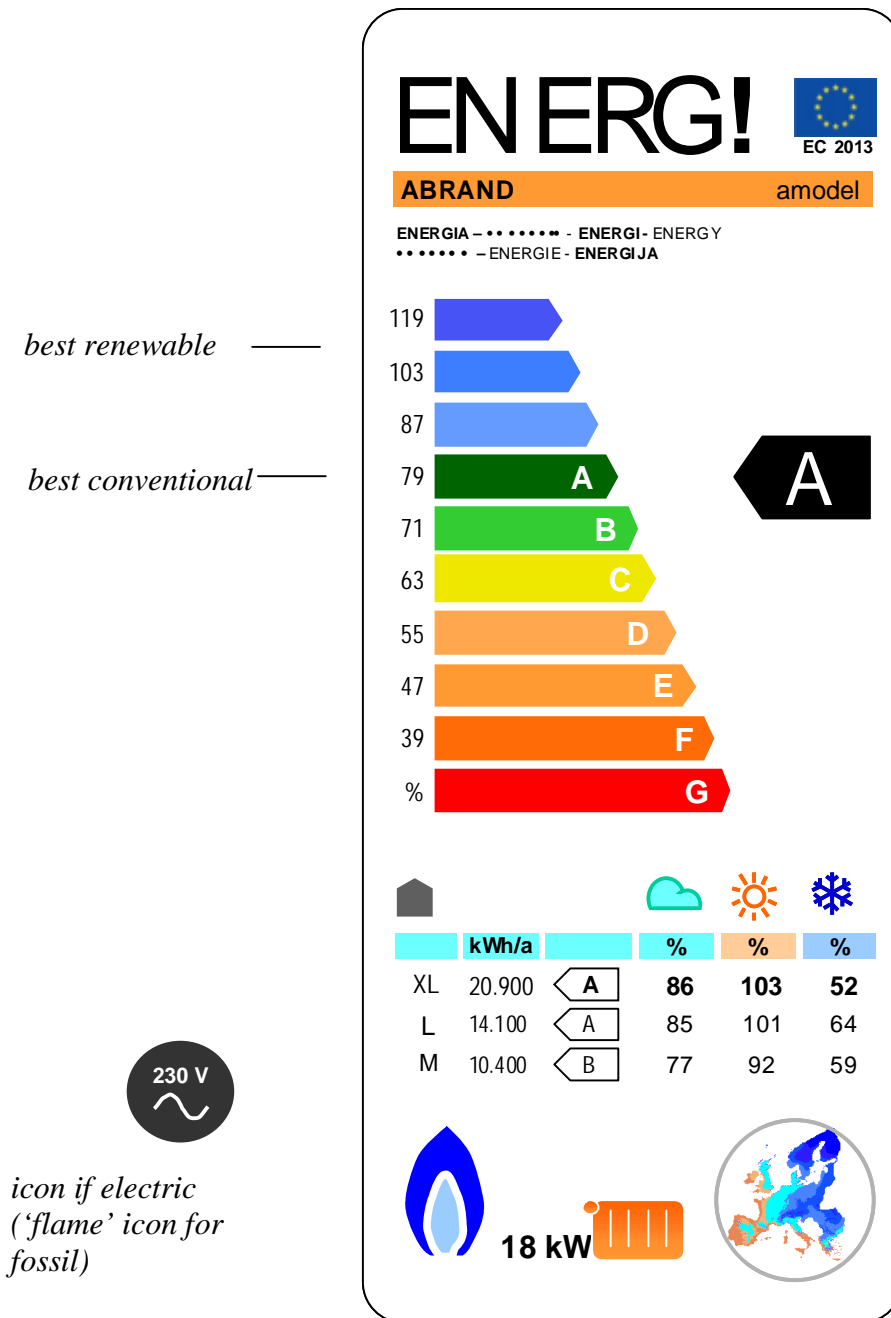
- 1) Manufacturer à header information
- 2) Model identification à header information
- 3) Energy efficiency rating à numerical
- 4) Function (water heating) à icon
- 5) Main energy source (fossil or electric) à icon
- 6) Load profile à à classification acronym (XS-S-M-L etc.)
- 7) In case of SOL or air-source HP being part of the product-configuration, the energy efficiency rating for the designated climates and the largest Load Profile shall be shown as subsidiary information.
- 8) Ratio of the annual energy consumption for space heating versus annual energy consumption water heat both at the (highest) declared Load Profile à diagram

**The Label for Cylinders** (see attached illustration) shall include the following information:

- 1) Manufacturer → header information
- 2) Model identification → header information
- 3) Energy efficiency rating → arrow for energy class
- 4) Standing loss in W → numerical
- 5) Storage tank nominal volume → numerical
- 6) Number of heat exchangers (1, 2 or 3) → icons

### 3. LABEL CLASSES

Indicative label classes **Boiler space heating (<[70] kW max. heat input)**



**Fig. III.1** (ENERG!® header and denominations still under discussion)  
 Note that last two columns are mandatory for SOL and air-source HP only

Indicative label classes **Combi-boiler water heating**

Space heating label as above plus water heating label as below:

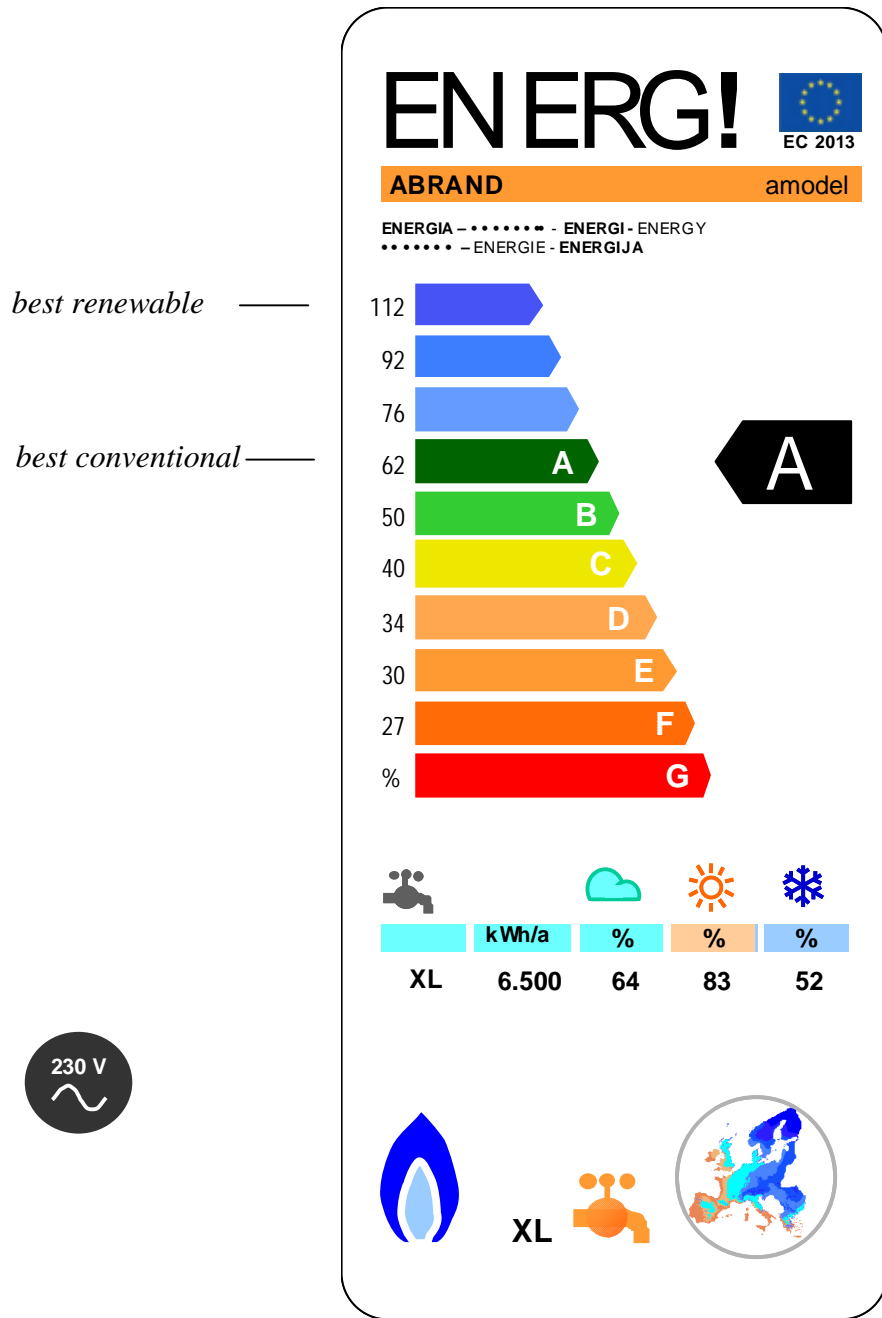
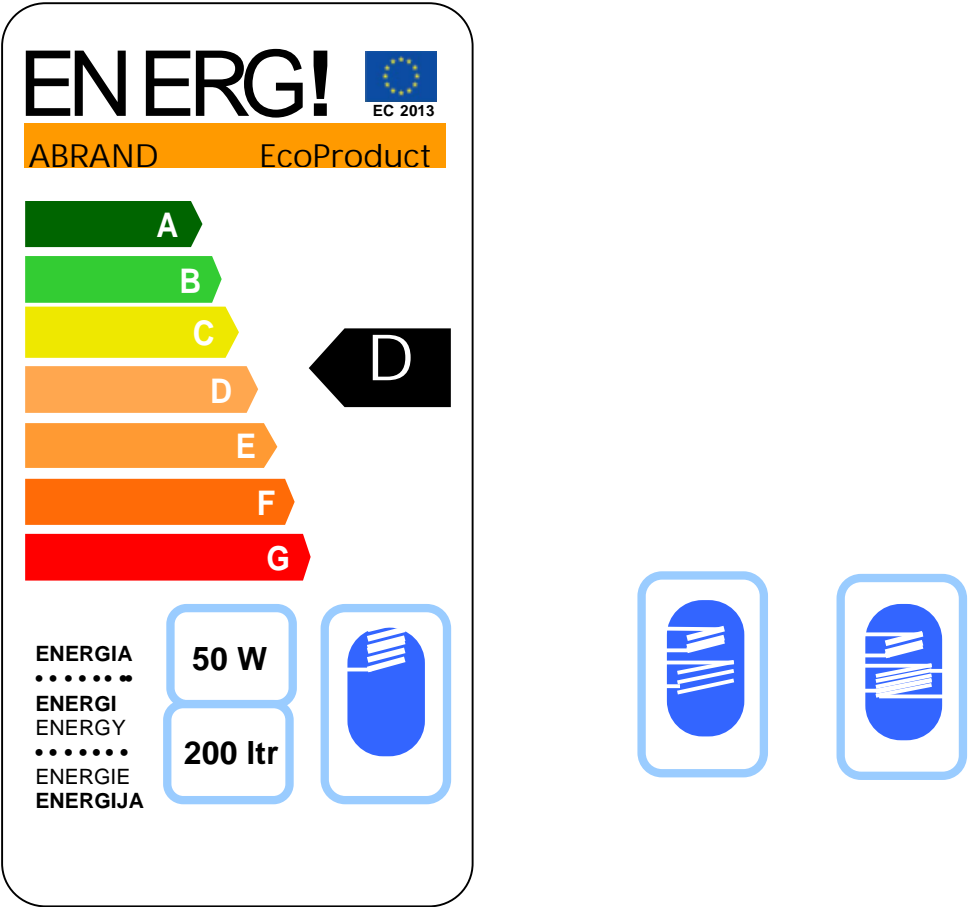


Fig. III.2 (ENERG!® header and denominations still under discussion)  
 Note that last two columns are mandatory for SOL and air-source HP only

Indicative label classes **Cylinders**

With alternative icons in case of 2 or 3 heat exchangers (instead of only 1)



**Fig. III.3** (ENERG!® header and denominations still under discussion)