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DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT  
DIRECTORATE-GENERAL FOR ENERGY  
SRD - Shared Resource Directorate  
**SRD.4 - Informatics & Logistics**

# **European Product Registry for Energy Labelling (EPREL)**

## **Space heaters (Packages)**

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Approved by:	
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## 1.1. Document History

Version	Date	Comment
1.00	18/07/2018	Draft Document created by Oscar Miralles (OM)
1.10	25/07/2018	Reviewed by Veerle Beelaerts (VB)

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## 1.2. Bibliography

- [1] EPREL, *Bussiness Glossary*, 2016.
- [2] EPREL, *COMMISSION DELEGATED REGULATION (EU) No 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temp.*
- [3] EPREL, XML Exchange Model, 2018.

## 1.3. Abbreviations and Glossary

See document "EPREL – Business Glossary" [1]

## **2. INTRODUCTION AND PURPOSE**

This document is a summary of all that is necessary for the EPREL to generate the UI form (list of fields and mock-up screenshot) for each product group, to generate the labels and to generate the product information sheet.

### **3. SPACE HEATERS (PACKAGES)**

COMMISSION DELEGATED REGULATION (EU) No 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the 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 [2].

These product group concerns 4 types of products "Space heaters and Combination heaters", "temperature control", "solar device", "Packages of space heater, temperature control and solar device; and Packages of combination heater, temperature control and solar device". They will have separate Product Information Sheets.

This document is intended only for "Packages of space heater, temperature control and solar device; and Packages of combination heater, temperature control and solar device".

#### **3.1. Fields/Exchange model**

List of fields extracted from the Regulation mentioned above and their correspondence with the fields in Data Exchange Model [3] class "SpaceHeaterPackage". The column "Item" is a reference to the field as defined in the Annex IV "Product fiche"; the name of the field, the type, if mandatory and a short description how it's filled or the units used.

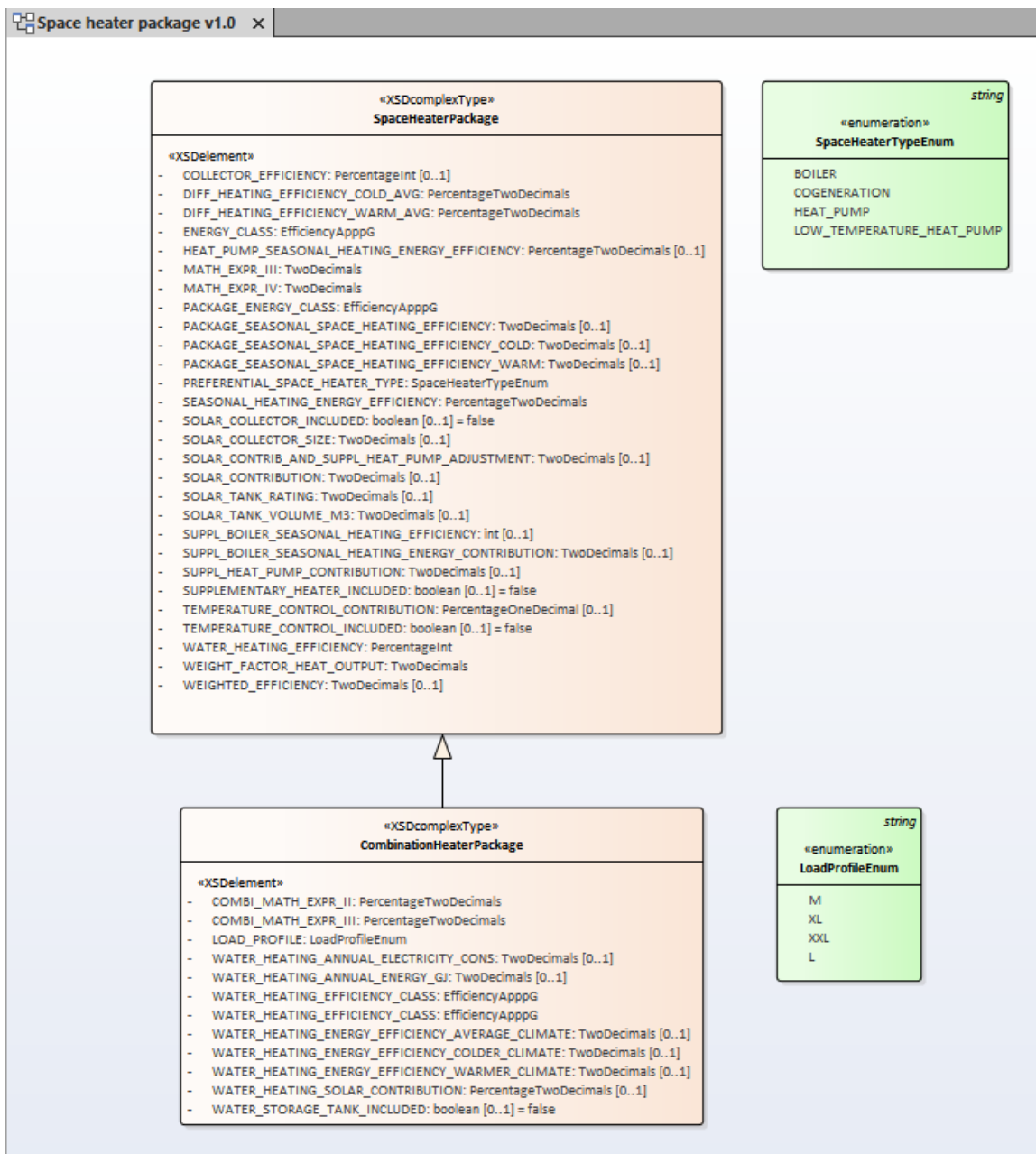


Figure 1 Exchange model

Item	Field	Type	Mandat ory	Description	Exchange Model
1.1(a)	Supplier's name or trademark	Text	TRUE		
1.1(b)	Supplier's model identifier	Text	TRUE		

Item	Field	Type	Mandatory	Description	Exchange Model
	Type	List	TRUE	<ul style="list-style-type: none"> <li>Space heater</li> <li>Combination heater</li> </ul>	
<b>Package of space heater or combination heater (Type = Both)</b>					
Annex III 3,4 (Label)	Solar collectors included	Boolean	FALSE	Default = False	SOLAR_COLLECTOR_INCLUDED
	Hot water storage tanks included	Boolean	FALSE	Default = False	WATER_STORAGE_TANK_INCLUDED
	Temperature controls included	Boolean	FALSE	Default = False	TEMPERATURE_CONTROL_INCLUDED
	Supplementary heaters included	Boolean	FALSE	Default = False	SUPPLEMENTARY_HEATER_INCLUDED
<b>Preferential heater</b>					
	Space heater type	List	TRUE	<ul style="list-style-type: none"> <li>Boiler</li> <li>Cogeneration</li> <li>Heat pump</li> <li>Low-temperature heat pump</li> </ul>	PREFERENTIAL_SPACE_HEATER_TYPE
Annex III 3,4 IV (Label)	Seasonal space heating energy efficiency class	List	TRUE	List in point 1 of Annex II Type = Both	ENERGY_CLASS
5(I) 6(a)(I)	Seasonal space heating energy efficiency	Number (No decimals)	TRUE	% (1) In Figure 1,2, 3,4	SEASONAL_HEATING_ENERGY_EFFICIENCY
5(II) 6(a)(I)	Weight factor (Preferential and Supplementary heater)	Number (2 decimals)	TRUE		WEIGHT_FACTOR_HEAT_OUTPUT
5(III) 6(a)(II)	Value of III [294/(11 x Prated)]	Number (2 decimals)	TRUE		MATH_EXPR_III



Item	Field	Type	Mandatory	Description	Exchange Model
5(IV) 6(a)(IV)	Value of IV [115/(11x · Prated)]	Number (2 decimals)	TRUE		MATH_EXPR_IV
5(V) 6(a)(V)	Difference between the seasonal space heating energy efficiencies under average and colder climate conditions	Number (2 decimals)	TRUE	%  Type = “Heat pump” and “Low-temperature head pump”	DIFF_HEATING_ EFFICIENCY_COLD_AVG
5(VI) 6(a)(VI)	Difference between the seasonal space heating energy efficiencies under warmer and average climate conditions	Number (2 decimals)	TRUE	%  Type = “Heat pump” and “Low-temperature head pump”	DIFF_HEATING_ EFFICIENCY_WARM_AVG
Figur	<b>Temperature control</b>				

Item	Field	Type	Mandatory	Description	Exchange Model
e 1,2,3, 4	Temperature control contribution	Number (1 decimal)	FALSE	<p>(2) In Figure 1,2, 3,4</p> <p>List from image:</p> <ul style="list-style-type: none"> <li>• Class I = 1%</li> <li>• Class II = 2%</li> <li>• Class III = 1.5%</li> <li>• Class IV = 2%</li> <li>• Class V = 3%</li> <li>• Class VI = 4%</li> <li>• Class VII = 3.5%</li> <li>• Class VIII = 5%</li> </ul> <p>Use the number selected.</p>	TEMPERATURE_CONTROL_CONTRIBUTION
	<b>Supplementary boiler</b>				
	Seasonal space heating energy efficiency	Number (No decimal)	FALSE	%	SUPPL_BOILER_SEASONAL_HEATING_EFFICIENCY
	Supplementary boiler contribution	Number (2 decimal)	FALSE	(3) In Figure 1,2,3,4	SUPPL_BOILER_SEASONAL_HEATING_ENERGY_CONTRIBUTION
	<b>Solar contribution</b>				
	Solar collector size	Number (2 decimal)	FALSE	m2	SOLAR_COLLECTOR_SIZE
	Solar Tank volume	Number (2 decimal)	FALSE	m3	SOLAR_TANK_VOLUME_M3
	Solar Collector efficiency	Number (No decimal)	FALSE	%	COLLECTOR_EFFICIENCY

Item	Field	Type	Mandatory	Description	Exchange Model
	Solar Tank rating	Number (No decimals)	FALSE	List from image: <ul style="list-style-type: none"> <li>A+ = 0.95</li> <li>A = 0.91</li> <li>B = 0.86</li> <li>C = 0.83</li> <li>D = 0.81</li> <li>E = 0.81</li> <li>F = 0.81</li> <li>G = 0.81</li> </ul> Use number selected	SOLAR_TANK_RATING
	Solar contribution	Number (2 decimals)	FALSE	(4) In Figure 1,2,3,4	SOLAR_CONTRIBUTION
<b>Supplementary heat pump</b>					
	Supplementary heat pump seasonal space heating energy efficiency	Number (2 decimals)	FALSE	%	HEAT_PUMP_SEASONAL_HEATING_ENERGY_EFFICIENCY
	Supplementary heat pump contribution	Number (2 decimals)	FALSE	(5) In Figure 1	SUPPL_HEAT_PUMP_CONTRIBUTION
<b>Solar contribution AND supplementary heat pump</b>					
	Solar contribution AND supplementary heat pump adjustment	Number (2 decimals)	FALSE	(6) In Figure 1	SOLAR_CONTRIB_AND_SUPPL_HEAT_PUMP_ADJUSTMENT
<b>Boiler and supplementary heat pump</b>					
	Low temperature heat emitters	Number (2 decimals)	FALSE	%	NOT IN MODEL
<b>Package</b>					

Item	Field	Type	Mandatory	Description	Exchange Model
	Seasonal space heating energy efficiency of package	Number (2 decimals)	FALSE	% (7) In Figure 1 (5) In Figure 2,3,4	PACKAGE_SEASONAL_SPACE_HEATING_EFFICIENCY
	Seasonal space heating energy efficiency class of package	List	TRUE	From list of classes in Table 1 or 2 of Annex II.	PACKAGE_ENERGY_CLASS
	Seasonal space heating energy efficiency of package (colder climate conditions)	Number (2 decimals)	FALSE	%	PACKAGE_SEASONAL_SPACE_HEATING_EFFICIENCY_COLD
	Seasonal space heating energy efficiency of package (warmer climate conditions)	Number (2 decimals)	FALSE	%	PACKAGE_SEASONAL_SPACE_HEATING_EFFICIENCY_WARM
<b>Package of combination heater (Type = Combination heater)</b>					
	<b>Water heater</b>				
Annex III 4 IV (Label)	Seasonal water heating energy efficiency class	List	TRUE	List in point 2 of Annex II	WATER_HEATING_EFFICIENCY_CLASS
6(b)(I)	Water heating energy efficiency of the combination heater	Number (2 decimals)	FALSE	% (1) In figure 5	NOT IN MODEL
6(b)(I)	Value of $[(220 \times Q_{ref})/Q_{non sol}]$	Number (2 decimals)	FALSE	%	COMBI_MATH_EXPR_II
6(b)(II)	Value of $[(Q_{aux} \times 2,5)/(220 \times Q_{ref})]$	Number (2 decimals)	FALSE	%	COMBI_MATH_EXPR_III

Item	Field	Type	Mandatory	Description	Exchange Model
Figure 5	Declared load profile	List	FALSE	M, XL, XXL, L	LOAD_PROFILE
	<b>Solar contribution</b>				
	Solar contribution	Number (2 decimals)	FALSE	% (2) In Figure 5	WATER_HEATING_ SOLAR_CONTRIBUTION
	<b>Package</b>				
	Water heating energy efficiency class of package (average climate conditions)	Number (2 decimals)	FALSE	%	NOT IN MODEL
	Water heating energy efficiency of package (average climate conditions)	Number (2 decimals)	FALSE	% (3) In figure 5	WATER_HEATING_ENERGY_ EFFICIENCY_AVERAGE_ CLIMATE
	Water heating energy efficiency of package (colder climate conditions)	Number (2 decimals)	FALSE	%	WATER_HEATING_ENERGY_ EFFICIENCY_COLDER_ CLIMATE
	Water heating energy efficiency of package (warmer climate conditions)	Number (2 decimals)	FALSE		WATER_HEATING_ENERGY_ EFFICIENCY_WARMER_ CLIMATE
					WATER_HEATING_EFFICIENCY WATER_HEATING_ANNUAL_ELECTRICITY_CONS WATER_HEATING_ANNUAL_ENERGY_GJ WATER_HEATING_EFFICIENCY_CLASSES

### 3.2. Mock-up

These are the mock-up screenshots of how the UI form will look like for the supplier to enter the model information manually.

As seen in previous table, depending on some selections, the screen will ask more or less fields.

The screenshot shows a web browser window with the URL 'http://'. The page title is 'EPREL Compliance website'. The main heading is 'Packages of space heaters/combination heaters'. Below this, there is a status bar showing 'Delegated Regulation 811/2013', 'EPREL Registration Number 8564125144', 'Version 3', 'Model identifier', and 'Supplier name/Trademark'. The status is 'Incomplete'.

**Navigation:**

- General information
- Label/Fiche
- Technical documentation
- Equivalent models
- Contact
- Access log
- Versions

**Actions:**

- Edit
- Back

**General information:**

Date of placement on the market: / /  
Date of end of placement on the market: / /

**Space heater** | Combination heater

**Package:**

- ☒ Solar collectors
- ☒ Hot water storage tanks
- ☒ Temperature controls
- ☒ Supplementary heaters

Seasonal space heating energy efficiency class of package: A++  
Seasonal space heating energy efficiency of package (%): 80.12  
Seasonal space heating energy efficiency of package (colder climate conditions) (%): 80.12  
Seasonal space heating energy efficiency of package (warmer climate conditions) (%): 80.12

**Preferential heater:**

**Boiler space heater** | Cogeneration space heater | Heat pump space heater | Low-Temperature Heat pump space heater

Seasonal space heating energy efficiency class: A++  
Seasonal space heating energy efficiency (%): 80  
Weight factor (Preferential and Supplementary heater) (%): 80.12  
Value of III: 294/(11 x Pr): 80.12  
Value of IV: 115/(11 x Pr): 80.12

**Temperature control:**

Class: Class I (1%)  
Class II (2%)

**Supplementary boiler:**

Seasonal space heating energy efficiency (%): 80  
Supplementary boiler contribution: 80.12

**Solar contribution:**

Solar collector size (m2): 10.12  
Solar tank volume (m3): 30  
Solar collector efficiency (%): 80  
Solar tank rating: A\* (0.95)  
Solar contribution: 80.12

**Supplementary heat pump:**

Supplementary heat pump seasonal space heating energy efficiency (%): 80  
Supplementary heat pump contribution: 80.12  
Solar contribution AND Supplementary heat pump adjustment: 80.12  
Boiler and supplementary heat pump low temperature heat emitters (%): 80.12

**Information:**

If you choose to allow EPREL to generate the labels for this model, you are accepting that the generated label is correct in format and content. Before accepting it, we recommend to generate the label to preview the output and verify them. If you upload a label manually it will be ignored and the generated used in Public Site.

☐ I accept the labels generated by EPREL for this model

**Save**

Figure 2 Packages of space heater temperature control and solar device

A Web Page

http://

English (minutes) MOVIE SPD 2.001

European Commission EPREL Compliance website

## Packages of space heaters/combination heaters

Delegated Regulation 811/2013 EPREL Registration Number **8564125144** Version 3 Model identifier Supplier name/Trademark

Status **Incomplete**

**Navigation**

General information

Label/Fiche

Technical documentation

Equivalent models

Contact

Access log

Versions

**Actions**

Edit Back

**General information**

Date of placement on the market / /

Date of end of placement on the market / /

Space heater Combination heater

Package

☒ Solar collectors

☒ Hot water storage tanks

☒ Temperature controls

☒ Supplementary heaters

Seasonal space heating energy efficiency class of package A++

Seasonal space heating energy efficiency of package (%) 80.12

Seasonal space heating energy efficiency of package (colder climate conditions) (%) 80.12

Seasonal space heating energy efficiency of package (warmer climate conditions) (%) 80.12

Preferential heater

Boiler space heater Cogeneration space heater Heat pump space heater Low-Temperature Heat pump space heater

Seasonal space heating energy efficiency class A++

Seasonal space heating energy efficiency (%) 80

Weight factor (Preferential and Supplementary heater) (%) 80.12

Value of III: 2/94/(11 x Pr) 80.12

Value of IV: 115/(11 x Pr) 80.12

Difference between the seasonal space heating energy efficiencies under average and colder climate conditions 80.12

Difference between the seasonal space heating energy efficiencies under warmer and average climate conditions 80.12

Temperature control

Class Class I (1%) Class II (2%)

Supplementary boiler

Seasonal space heating energy efficiency (%) 80

Supplementary boiler contribution 80.12

Solar contribution

Solar collector size (m2) 10.12

Solar tank volume (m3) 30

Solar collector efficiency (%) 80

Solar tank rating A\* (0.95)

Solar contribution 80.12

Supplementary heat pump

Supplementary heat pump seasonal space heating energy efficiency (%) 80

Supplementary heat pump contribution 80.12

Solar contribution AND Supplementary heat pump adjustment 80.12

Boiler and supplementary heat pump low temperature heat emitters (%) 80.12

**i** If you choose to allow EPREL to generate the labels for this model, you are accepting that the generated label is correct in format and content. Before accepting it, we recommend to generate the label to preview the output and verify them. If you upload a label manually it will be ignored and the generated used in Public Site.

☐ I accept the labels generated by EPREL for this model

Save

**Figure 3 Packages of space heater temperature control and solar device (Heat pump)**

A Web Page
http://

EPREL Compliance website
English
(Minutes) MOVIE SPD 2.001

# Packages of space heaters/combination heaters

Delegated Regulation 811/2013      EPREL Registration Number **8564125144**      Version 3      Model identifier       Status **Incomplete**      Supplier name/Trademark

**Navigation**

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- Label/Fiche
- Technical documentation
- Equivalent models
- Contact
- Access log
- Versions

**Actions**

Edit
Back

**General information**

Date of placement on the market 
Date of end of placement on the market

Space heater
Combination heater

**Package**

- ☒ Solar collectors
- ☒ Hot water storage tanks
- ☒ Temperature controls
- ☒ Supplementary heaters

Seasonal space heating energy efficiency class of package	A++
Seasonal space heating energy efficiency of package (%)	80.12
Seasonal space heating energy efficiency of package (colder climate conditions) (%)	80.12
Seasonal space heating energy efficiency of package (warmer climate conditions) (%)	80.12
Water heating energy efficiency class of package (average climate conditions)	A++
Water heating energy efficiency of package (average climate conditions) (%)	80.12
Water heating energy efficiency of package (colder climate conditions) (%)	80.12
Water heating energy efficiency of package (warmer climate conditions) (%)	80.12

**Preferential heater**

Boiler space heater
Cogeneration space heater
Heat pump space heater
Low-Temperature Heat pump space heater

Seasonal space heating energy efficiency class	A++
Seasonal space heating energy efficiency (%)	80
Weight factor (Preferential and Supplementary heater) (%)	80.12
Value of III: $2.94/(11 \times Pr)$	80.12
Value of IV: $115/(11 \times Pr)$	80.12

Seasonal water heating energy efficiency class	A++
Water heating energy efficiency of the combination heater (%)	80
Value of the mathematical expression $(220 \times Q_{ref})/Q_{onsol}$	80.12
Value of the mathematical expression $(Q_{aux} \times 2.5)/(220 \times Q_{ref})$	80.12
Declared load profile	XXL

**Temperature control**

Class	Class I (1%)
	Class II (2%)

**Supplementary boiler**

Seasonal space heating energy efficiency (%)	80
Supplementary boiler contribution	80.12

**Solar contribution**

Solar collector size (m <sup>2</sup> )	10.12
Solar tank volume (m <sup>3</sup> )	30
Solar collector efficiency (%)	80
Solar tank rating	A* (0.95)
Solar contribution	80.12

**Supplementary heat pump**

Supplementary heat pump seasonal space heating energy efficiency (%)	80
Supplementary heat pump contribution	80.12
Solar contribution AND Supplementary heat pump adjustment	80.12
Boiler and supplementary heat pump low temperature heat emitters (%)	80.12

If you choose to allow EPREL to generate the labels for this model, you are accepting that the generated label is correct in format and content. Before accepting it, we recommend to generate the label to preview the output and verify them. If you upload a label manually it will be ignored and the generated used in Public Site.

☐ I accept the labels generated by EPREL for this model

Save

**Figure 4 Packages of combination heater temperature control and solar device**



A Web Page
http://

**EPREL Compliance website**
English
(minutes) MOVIE SPD 2.001

# Packages of space heaters/combination heaters

Delegated Regulation 811/2013      EPREL Registration Number **8564125144**      Version 3      Model identifier       Status **Incomplete**      Supplier name/Trademark

**Navigation**

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**Actions**

Edit
Back

**General information**

Date of placement on the market  /  /

Date of end of placement on the market  /  /

Space heater ☐ **Combination heater** ☒

**Package**

☒ Solar collectors  
☒ Hot water storage tanks  
☒ Temperature controls  
☒ Supplementary heaters

Seasonal space heating energy efficiency class of package  A++

Seasonal space heating energy efficiency of package (%)  80.12

Seasonal space heating energy efficiency of package (colder climate conditions) (%)  80.12

Seasonal space heating energy efficiency of package (warmer climate conditions) (%)  80.12

Water heating energy efficiency class of package (average climate conditions)  A++

Water heating energy efficiency of package (average climate conditions) (%)  80.12

Water heating energy efficiency of package (colder climate conditions) (%)  80.12

Water heating energy efficiency of package (warmer climate conditions) (%)  80.12

**Preferential heater**

Boiler space heater ☐
Cogeneration space heater ☐
**Heat pump space heater** ☒
Low-Temperature Heat pump space heater ☐

Seasonal space heating energy efficiency class  A++

Seasonal space heating energy efficiency (%)  80

Weight factor (Preferential and Supplementary heater) (%)  80.12

Value of III:  $2.94/(11 \times Pr)$   80.12

Value of IV:  $115/(11 \times Pr)$   80.12

Difference between the seasonal space heating energy efficiencies under average and colder climate conditions  80.12

Difference between the seasonal space heating energy efficiencies under warmer and average climate conditions  80.12

Seasonal water heating energy efficiency class  A++

Water heating energy efficiency of the combination heater (%)  80

Value of the mathematical expression  $(220 \times Q_{ref})/Q_{onsol}$   80.12

Value of the mathematical expression  $(Q_{aux} \times 2.5)/(220 \times Q_{ref})$   80.12

Declared load profile  XXL

**Temperature control**

Class  Class I (1%)

Class II (2%)

**Supplementary boiler**

Seasonal space heating energy efficiency (%)  80

Supplementary boiler contribution  80.12

**Solar contribution**

Solar collector size (m<sup>2</sup>)  10.12

Solar tank volume (m<sup>3</sup>)  30

Solar collector efficiency (%)  80

Solar tank rating  A\* (0.95)

Solar contribution  80.12

**Supplementary heat pump**

Supplementary heat pump seasonal space heating energy efficiency (%)  80

Supplementary heat pump contribution  80.12

Solar contribution AND Supplementary heat pump adjustment  80.12

Boiler and supplementary heat pump low temperature heat emitters (%)  80.12

If you choose to allow EPREL to generate the labels for this model, you are accepting that the generated label is correct in format and content. Before accepting it, we recommend to generate the label to preview the output and verify them. If you upload a label manually it will be ignored and the generated used in Public Site.

☐ I accept the labels generated by EPREL for this model

Save

**Figure 5 Packages of combination heater temperature control and solar device (Heat pump)**

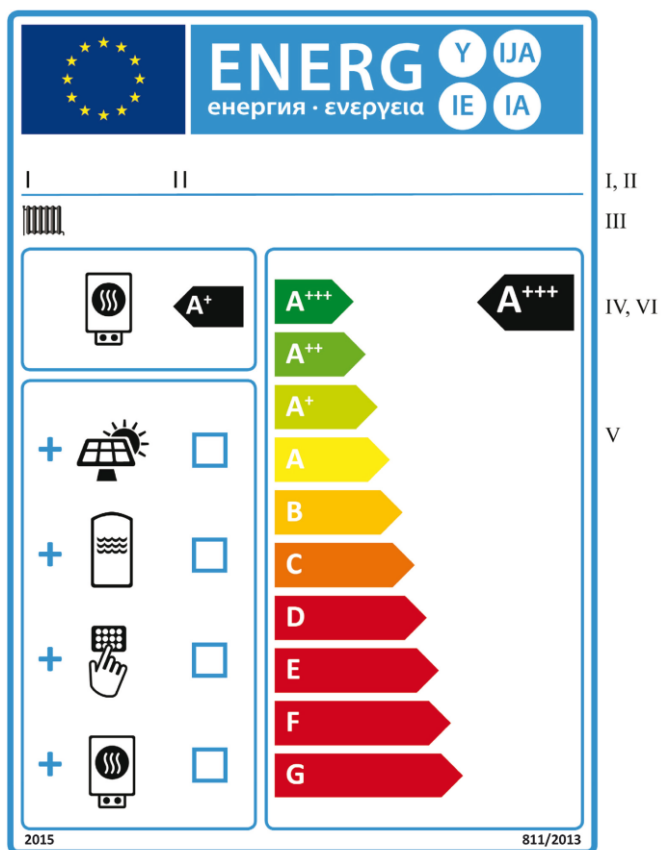
### 3.3. Labels

Description of the labels can be found in Annex III of the regulation.

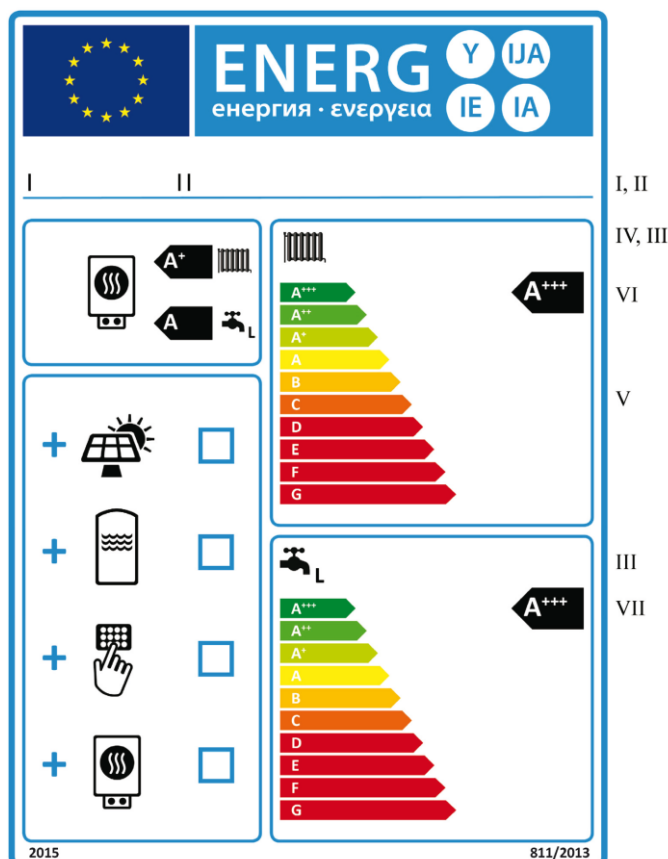
This is a summary of which one has to be generated by the system followed by images of the labels.

		Placement on the market	
Label		Date From	Date To
<b>3. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE</b>			
Label for packages of space heater, temperature control and solar device in seasonal space heating energy efficiency classes A +++ to G		26/09/2015	Onwards
<b>4. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE</b>			
Label for packages of combination heater, temperature control and solar device in seasonal space heating and water heating energy efficiency classes A +++ to G		26/09/2015	Onwards

#### 3. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE



#### 4. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE



### 3.4. Product Information Sheet

As mentioned in the Delegated Act [2], Annex IV:

#### 5. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

The fiche for packages of space heater, temperature control and solar device shall contain the elements set out in Figure 1, Figure 2, Figure 3 and Figure 4, respectively, for evaluating the seasonal space heating energy efficiency of a package of space heater, temperature control and solar device, including the following information:

— I: the value of the seasonal space heating energy efficiency of the preferential space heater, expressed in %;

— II: the factor for weighting the heat output of preferential and supplementary heaters of a package as set out in Tables 5 and 6 of this Annex, respectively;

— III: the value of the mathematical expression:  $294/(11 \times \text{Prated})$ , whereby Prated is related to the preferential space heater;

— IV: the value of the mathematical expression  $115/(11 \times \text{Prated})$ , whereby Prated is related to the preferential space heater;

in addition, for preferential heat pump space heaters:

— V: the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %;

— VI: the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %.

## 6. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

The fiche for packages of combination heater, temperature control and solar device shall contain the elements set out in points (a) and (b):

(a) the elements set out in Figure 1 and Figure 3, respectively, for evaluating the seasonal space heating energy efficiency of a package of combination heater, temperature control and solar device, including the following information:

— I: the value of the seasonal space heating energy efficiency of the preferential combination heater, expressed in %;

— II: the factor for weighting the heat output of the preferential and supplementary heaters of a package as set out in Tables 5 and 6 of this Annex, respectively;

— III: the value of the mathematical expression:  $294/(11 \times \text{Prated})$ , whereby Prated is related to the preferential combination heater;

— IV: the value of the mathematical expression  $115/(11 \times \text{Prated})$ , whereby Prated is related to the preferential combination heater;

in addition, for preferential heat pump combination heaters:

— V: the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %;

— VI: the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %;

(b) the elements set out in Figure 5 for evaluating the water heating energy efficiency of a package of combination heater, temperature control and solar device, where the following information shall be included:

— I: the value of the water heating energy efficiency of the combination heater, expressed in %;

— II: the value of the mathematical expression  $(220 \times Q_{\text{ref}})/Q_{\text{nonsol}}$ , where  $Q_{\text{ref}}$  is taken from Table 15 in Annex VII and  $Q_{\text{nonsol}}$  from the product fiche of the solar device for the declared load profile M, L, XL or XXL of the combination heater;

— III: the value of the mathematical expression  $(Q_{\text{aux}} \times 2,5)/(220 \times Q_{\text{ref}})$ , expressed in %, where  $Q_{\text{aux}}$  is taken from the product fiche of the solar device and  $Q_{\text{ref}}$  from Table 15 in Annex VII for the declared load profile M, L, XL or XXL.

For knowing what field goes to the numbered fields (1, 2, 3, 4, 5, 6, 7) see [Fields](#).

### 3.4.1. *Figure 1*

For preferential boiler space heaters and preferential boiler combination heaters, element of the fiche for a package of space heater, temperature control and solar device and a package of combination heater, temperature control and solar device, respectively, indicating the seasonal space heating energy efficiency of the package offered.

Seasonal space heating energy efficiency of boiler		1 <div style="border: 1px solid black; padding: 2px; display: inline-block;">I</div> %																														
<hr/>																																
Temperature control	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 %	2 + <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %																														
<hr/>																																
Supplementary boiler	Seasonal space heating energy efficiency (in %)	3 ± <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %																														
<hr/>																																
Solar contribution	<div style="display: flex; justify-content: space-between;"> <div>From fiche of solar device</div> <div>Tank rating A* = 0,95, A = 0,91, B = 0,86, C = 0,83, D-G = 0,81</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div>Collector size (in m<sup>2</sup>)</div> <div>Tank volume (in m<sup>3</sup>)</div> <div>Collector efficiency (in %)</div> </div>	4 + <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %																														
<hr/>																																
Supplementary heat pump	Seasonal space heating energy efficiency (in %)	5 + <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %																														
<hr/>																																
Solar contribution AND Supplementary heat pump	Select smaller value	6 - <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %																														
<hr/>																																
Seasonal space heating energy efficiency of package		7 <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %																														
<hr/>																																
Seasonal space heating energy efficiency class of package																																
<div style="border: 1px solid black; padding: 10px; display: inline-block;"> <table style="margin: auto; text-align: center;"> <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> </div>			<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 %																							
<hr/>																																
Boiler and supplementary heat pump installed with low temperature heat emitters at 35 °C?																																
From fiche of heat pump	<div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> + ( 50 × 'II' ) =	<div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %																														
<hr/>																																
<p><i>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 the 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.</i></p>																																

**Figure 6 Annex IV – Figure 1**

### 3.4.2. Figure 2

For preferential cogeneration space heaters, element of the fiche for a package of space heater, temperature control and solar device indicating the seasonal space heating energy efficiency of the package offered.

Seasonal space heating energy efficiency of cogeneration space heater		① "I" %
Temperature control From fiche of temperature control	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 %	+ ② %
Supplementary boiler From fiche of boiler	Seasonal space heating energy efficiency (in %)	③ %
Solar contribution From fiche of solar device		
Collector size (in m <sup>2</sup> )	Tank volume (in m <sup>3</sup> )	Collector efficiency (in %)
$(\text{"III"} \times \boxed{\phantom{00}} + \text{"IV"} \times \boxed{\phantom{00}}) \times 0,7 \times (\boxed{\phantom{00}}/100) \times \boxed{\phantom{00}} = + \text{④ \%}$		
Seasonal space heating energy efficiency of package		⑤ %
Seasonal space heating energy efficiency class of package		
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px 5px;">G</div> <div style="border: 1px solid black; padding: 2px 5px;">F</div> <div style="border: 1px solid black; padding: 2px 5px;">E</div> <div style="border: 1px solid black; padding: 2px 5px;">D</div> <div style="border: 1px solid black; padding: 2px 5px;">C</div> <div style="border: 1px solid black; padding: 2px 5px;">B</div> <div style="border: 1px solid black; padding: 2px 5px;">A</div> <div style="border: 1px solid black; padding: 2px 5px;">A*</div> <div style="border: 1px solid black; padding: 2px 5px;">A**</div> <div style="border: 1px solid black; padding: 2px 5px;">A***</div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 5px;"> <span>&lt; 30 %</span> <span>≥ 30 %</span> <span>≥ 34 %</span> <span>≥ 36 %</span> <span>≥ 75 %</span> <span>≥ 82 %</span> <span>≥ 90 %</span> <span>≥ 98 %</span> <span>≥ 125 %</span> <span>≥ 150 %</span> </div> </div>		
<p><i>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 the 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.</i></p>		

**Figure 7 Annex IV – Figure 2**

### 3.4.3. Figure 3

For preferential heat pump space heaters and preferential heat pump combination heaters, element of the fiche for a package of space heater, temperature control and solar device and a package of combination heater, temperature control and solar device, respectively, indicating the seasonal space heating energy efficiency of the package offered.

Seasonal space heating energy efficiency of heat pump		1 <div style="border: 1px solid black; padding: 2px; display: inline-block;">I'</div> %
<hr/>		
Temperature control	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 %	2 + <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %
<hr/>		
Supplementary boiler	Seasonal space heating energy efficiency (in %)	3 - <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %
<hr/>		
Solar contribution	<div style="display: flex; justify-content: space-between;"> <div>From fiche of solar device</div> <div>Tank rating A* = 0,95, A = 0,91, B = 0,86, C = 0,83, D-G = 0,81</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div>Collector size (in m<sup>2</sup>)</div> <div>Tank volume (in m<sup>3</sup>)</div> <div>Collector efficiency (in %)</div> </div>	4 + <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %
<hr/>		
Seasonal space heating energy efficiency of package under average climate		5 <div style="border: 1px solid black; padding: 2px; display: inline-block;">  </div> %
<hr/>		
Seasonal space heating energy efficiency class of package under average climate		
<div style="border: 1px solid black; padding: 10px; margin: 0 auto; width: 80%;"> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px 5px;">G</div> <div style="border: 1px solid black; padding: 2px 5px;">F</div> <div style="border: 1px solid black; padding: 2px 5px;">E</div> <div style="border: 1px solid black; padding: 2px 5px;">D</div> <div style="border: 1px solid black; padding: 2px 5px;">C</div> <div style="border: 1px solid black; padding: 2px 5px;">B</div> <div style="border: 1px solid black; padding: 2px 5px;">A</div> <div style="border: 1px solid black; padding: 2px 5px;">A<sup>+</sup></div> <div style="border: 1px solid black; padding: 2px 5px;">A<sup>++</sup></div> <div style="border: 1px solid black; padding: 2px 5px;">A<sup>+++</sup></div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>&lt; 30 %</span> <span>≥ 30 %</span> <span>≥ 34 %</span> <span>≥ 36 %</span> <span>≥ 75 %</span> <span>≥ 82 %</span> <span>≥ 90 %</span> <span>≥ 98 %</span> <span>≥ 125 %</span> <span>≥ 150 %</span> </div> </div>		
<hr/>		
Seasonal space heating energy efficiency under colder and warmer climate conditions		
Colder:	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">  </div> <div style="margin: 0 5px;">- 'V' =</div> <div style="border: 1px solid black; padding: 2px; margin-left: 5px;">  </div> <div style="margin-left: 5px;">%</div> </div>	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">  </div> <div style="margin: 0 5px;">+ 'VI' =</div> <div style="border: 1px solid black; padding: 2px; margin-left: 5px;">  </div> <div style="margin-left: 5px;">%</div> </div>
<p><i>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 the 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.</i></p>		

**Figure 8 Annex IV – Figure 3**

#### 3.4.4. Figure 4

For preferential low-temperature heat pumps, element of the fiche for a package of space heater, temperature control and solar device indicating the seasonal space heating energy efficiency of the package offered.



Seasonal space heating energy efficiency of low temperature heat pump		① <div style="border: 1px solid black; padding: 2px 10px;">'I'</div> %
Temperature control From fiche of temperature control	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           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 %         </div>	② + <div style="border: 1px solid black; padding: 2px 10px;">  </div> %
Supplementary boiler From fiche of boiler	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Seasonal space heating energy efficiency (in %)</div> <div style="margin-left: 40px;">           ( <div style="border: 1px solid black; padding: 2px 10px;">  </div> - 'I' ) × 'II' = - <div style="border: 1px solid black; padding: 2px 10px;">  </div> %         </div>	③ - <div style="border: 1px solid black; padding: 2px 10px;">  </div> %
Solar contribution From fiche of solar device	<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; width: 20%;">Collector size (in m<sup>2</sup>)</div> <div style="border: 1px solid black; padding: 5px; width: 20%;">Tank volume (in m<sup>3</sup>)</div> <div style="border: 1px solid black; padding: 5px; width: 20%;">Collector efficiency (in %)</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">           Tank rating            A* = 0,95, A = 0,91,            B = 0,86, C = 0,83,            D-G = 0,81         </div> </div> <div style="margin-top: 10px;">           ( 'III' × <div style="border: 1px solid black; padding: 2px 10px;">  </div> + 'IV' × <div style="border: 1px solid black; padding: 2px 10px;">  </div> ) × 0,45 × ( <div style="border: 1px solid black; padding: 2px 10px;">  </div> / 100 ) × <div style="border: 1px solid black; padding: 2px 10px;">  </div> = + <div style="border: 1px solid black; padding: 2px 10px;">  </div> %         </div>	④ + <div style="border: 1px solid black; padding: 2px 10px;">  </div> %
Seasonal space heating energy efficiency of package under average climate		⑤ <div style="border: 1px solid black; padding: 2px 10px;">  </div> %
<div style="border: 1px solid black; padding: 10px; text-align: center; margin: 10px 0;"> <div style="display: flex; justify-content: space-around; font-weight: bold; font-size: 1.2em;"> <span>G</span><span>F</span><span>E</span><span>D</span><span>C</span><span>B</span><span>A</span><span>A*</span><span>A**</span><span>A***</span> </div> <div style="display: flex; justify-content: space-around; font-size: 0.8em; margin-top: 5px;"> <span>&lt; 55 %</span><span>≥ 55 %</span><span>≥ 59 %</span><span>≥ 61 %</span><span>≥ 100 %</span><span>≥ 107 %</span><span>≥ 115 %</span><span>≥ 123 %</span><span>≥ 150 %</span><span>≥ 175 %</span> </div> </div>		
Seasonal space heating energy efficiency under colder and warmer climate conditions		
Colder:	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px 10px; margin-right: 5px;">  </div> <div style="margin: 0 5px;">- 'V'</div> <div style="border: 1px solid black; padding: 2px 10px; margin-left: 5px;">  </div> %         </div>	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px 10px; margin-right: 5px;">  </div> <div style="margin: 0 5px;">+ 'VI'</div> <div style="border: 1px solid black; padding: 2px 10px; margin-left: 5px;">  </div> %         </div>
<p><i>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 the 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.</i></p>		

**Figure 9 Annex IV – Figure 4**

### 3.4.5. Figure 5

For preferential boiler combination heaters and preferential heat pump combination heaters, element of the fiche for a package of combination heater, temperature control and solar device indicating the water heating energy efficiency of the package offered.



Water heating energy efficiency of combination heater

1

%

Declared load profile:

---

Solar contribution

From fiche of solar device

Auxiliary electricity

2

%

( 1,1 × 'I' - 10 % ) × 'II' - 'III' - 'I' =

+

2

%

---

Water heating energy efficiency of package under average climate

3

%

---

Water heating energy efficiency class of package under average climate

	<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>
<b>M</b>	< 27 %	≥ 27 %	≥ 30 %	≥ 33 %	≥ 36 %	≥ 39 %	≥ 65 %	≥ 100 %	≥ 130 %	≥ 163 %
<b>L</b>	< 27 %	≥ 27 %	≥ 30 %	≥ 34 %	≥ 37 %	≥ 50 %	≥ 75 %	≥ 115 %	≥ 150 %	≥ 188 %
<b>XL</b>	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 55 %	≥ 80 %	≥ 123 %	≥ 160 %	≥ 200 %
<b>XXL</b>	< 28 %	≥ 28 %	≥ 32 %	≥ 36 %	≥ 40 %	≥ 60 %	≥ 85 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency under colder and warmer climate conditions

3

2

Colder:

- 0,2 ×

=

%

3

2

Warmer:

+ 0,4 ×

=

%

---

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 the 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 10 Annex IV – Figure 5**