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LabelPack A+



Labelpack A+ online tool handbook

A manual for the users of the online tool for the calculation and labeling of packages of water and space heating systems


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KEY

This manual uses hyperlinks to facilitate the analysis of the diverse content.

You may click on photos and figures, to get further details. The following symbols are also used.

 Link to LabelPackA + Online Tool Homepage

 Link to content

 Link to example

 Continue to the next slide

1. INTRODUCTION

Before proceeding to the calculation of the label it is important to:

1. KNOW WHEN TO ISSUE THE LABEL

- If you place in the market and/or put into service systems with:
 - 1) Heaters ($P \leq 70 \text{kW}$) for DHW, Heating or Combi-systems;
 - 2) Temperature Control Device (Heating);
 - 3) Solar devices; 4) Heat storage

2. KNOW THE SYSTEM

- Know which is the preferred heater, where the heat store, circulation system, etc. are located

3. KNOW HOW TO FIND THE NEEDED INFORMATION

- Ordering directly from your supplier / reseller, exploring the manufacturers website and product webpage



2. PACKAGE LABEL CALCULATION

1. IDENTIFICATION OF THE CASE IN ANALYSIS

- The tool covers 6 systems: 1 DHW, 3 Space Heaters and 2 combination heaters
Boiler, Heat pump Boiler, Cogeneration, Heat pump

2. COLLECTION OF INFORMATION ON SYSTEM COMPONENTS

- Product datasheet and / or Energy Label, technical documentation and detailed information

3. IDENTIFY DATA TO BE USED

- Understand and identify required and available data

4. AUXILIARY CALCULATIONS, IF NEEDED

- Use of relevant methodologies when relevant (Ex: SOLCAL)

5. INSERT THE DATA INTO THE LPA+ ONLINE TOOL



3.THE ONLINE CACULATION TOOL

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 849905



Calculate the label

Upcoming Events

[Back to start](#)

English

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Calculating Package Efficiency and Class

What type of package would you like to calculate?

- [Water Heater](#)
- [Space Heater-](#)
- [Combination Heater-](#)



Package label calculation

Each package gathering a water-heater, a space-heater, or a combination heater, with a solar thermal device has a dedicated energy efficiency label.

Those calculation methods are detailed inside delegated regulations:

- Package of water-heater:
 - Delegated regulation 812-2013, annex IV, 4. PACKAGES OF WATER HEATER AND SOLAR DEVICE
- Package of space-heater:
 - Delegated regulation 811-2013, annex IV, 5. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE
 - Package could be based on preferential Boiler, Cogeneration heater or Heat pump.
- Package of combination heater:
 - Delegated regulation 811-2013, annex IV, 6. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE
 - Package could be based on preferential Boiler or Heat pump.

Energy efficiency of water-heater package in a nutshell

Water-heater package energy efficiency is based on:

- the value of the water heating energy efficiency of the water heater, expressed in %, taken from the water-heater product fiche.
- the value of a mathematical expression combining the reference energy volume (Q_{ref}) associated to each load profile, and the annual non-solar heat contribution (Q_{nonsol}) corresponding to annual contribution of electricity and/or fuels to the useful heat output of a solar water heater or a package of water heater and solar device, taking into account the annual amount of heat captured by the solar collector and the heat losses of the solar hot water storage tank.
- the value of the mathematical expression (in %) combining the auxiliary electricity consumption (Q_{aux}) of a solar water heater or a solar-only system that is due to the pump power consumption and the standby power consumption, expressed in kWh in terms of final energy, and the reference energy volume (Q_{ref}) associated to each load profile (taken from product fiche).

Calculations have to be made for colder, average and warmer climate.

Energy efficiency of space heater package in a nutshell

Space heater package energy efficiency is based on:

- the value of the seasonal space heating energy efficiency of the preferential space heater (in %, taken from product fiche)
- the factor for weighting the heat output of preferential and supplementary heaters of a package (see tables 5 and 6 of 811-2013 Annex 4)
- values of 2 mathematical expressions based on the rated output of the preferential space heater

In addition, for preferential heat pump space heaters:

- the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions (in %);
- the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions (in %)

Data regarding solar thermal device is taken from the product fiche: collector size, tank volume, collector efficiency.

Energy efficiency of combination heater package in a nutshell

Combination heater package energy efficiency is divided into space heater efficiency and water heater efficiency.

Space heating efficiency:

- Values are the same than the ones calculated and used for Space heater package energy efficiency.

Water heating efficiency:

- Values are the same than the ones calculated and used for Water-heater package energy efficiency.

How to apply those calculations?

Calculate package energy efficiency is quite complex, and need, on one hand, some values taken from different fiches corresponding to products that composed the package, and on the other hand values directly calculated.

One simply and conform to regulation solution exists:

The Label Pack A+ online calculation tool!

Freely available on [the LPA+ website](#)

Allows to:

- Calculate energy efficiency
- Obtain the efficiency class
 - Edit the package label

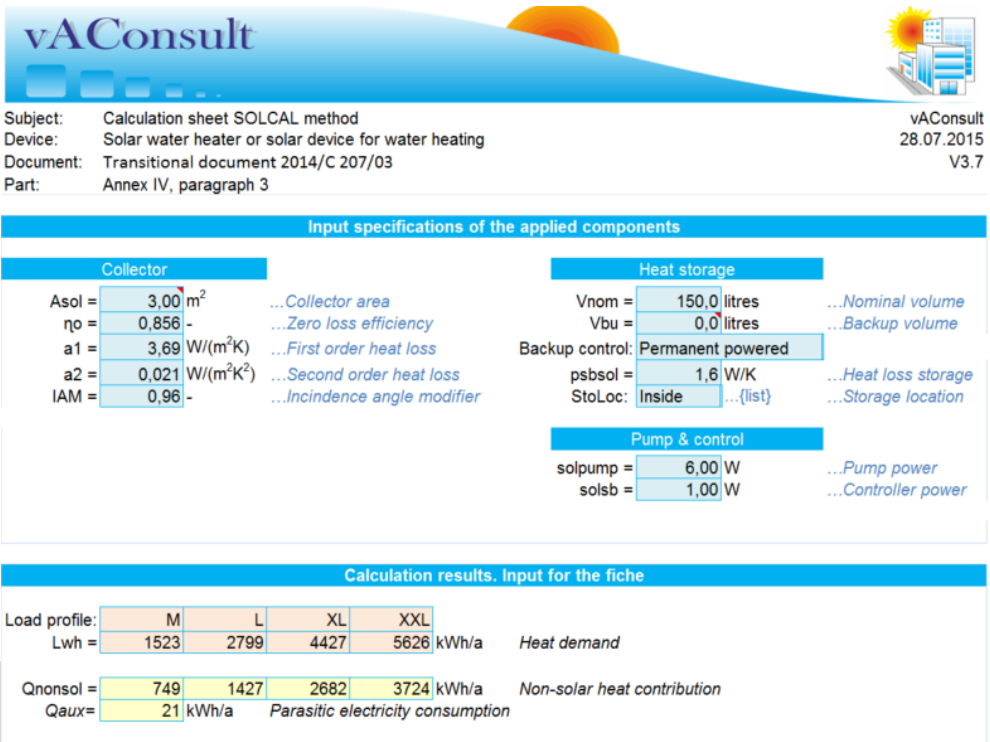
Tutorial for the online calculation tool

Prior entering the online tool, you should determine the Q_{nonsol} and the Q_{aux} , based on the solar system data you will use.

These 2 values can be calculated by using the SOLCAL methodology.

You can use the tool available on the LPA+ website [\[insert URL\]](#), or better, ask your manufacturer, supplier or dealer to help you with this.

Using the tool available on the LPA+ website, based on SOLCAL methodology, to calculate:
 Q_{nonsol}
 Q_{aux} .



vAConsult

Subject: Calculation sheet SOLCAL method
 Device: Solar water heater or solar device for water heating
 Document: Transitional document 2014/C 207/03
 Part: Annex IV, paragraph 3

vAConsult
28.07.2015
V3.7

Input specifications of the applied components

Collector		Heat storage	
Asol =	3,00 m ² ...Collector area	Vnom =	150,0 litres ...Nominal volume
η_0 =	0,856 - ...Zero loss efficiency	Vbu =	0,0 litres ...Backup volume
a1 =	3,69 W/(m ² K) ...First order heat loss	Backup control:	Permanent powered
a2 =	0,021 W/(m ² K ²) ...Second order heat loss	psbsol =	1,6 W/K ...Heat loss storage
IAM =	0,96 - ...Incidence angle modifier	StoLoc =	Inside ...Storage location
		Pump & control	
		solpump =	6,00 W ...Pump power
		solsb =	1,00 W ...Controller power

Calculation results. Input for the fiche

Load profile:	M	L	XL	XXL	
Lwh =	1523	2799	4427	5626 kWh/a	Heat demand
Q_{nonsol} =	749	1427	2682	3724 kWh/a	Non-solar heat contribution
Q_{aux} =	21 kWh/a	Parasitic electricity consumption			

Tutorial for the online calculation tool

Online tool home page: first steps

1/ Direct link to the tool

2/ Below on this page, the tool is available

3/ Select the type of package you want to calculate

Tutorial for the online calculation tool

Water-heater package

First step: water heater specifications

[Back to start](#)

English ▼

Calculating Package Efficiency and Class

Water heater

Water heating energy efficiency of water heater (in %)

90

Declared load profile

L

This value is the water heating energy efficiency of the main heating source, expressed in %, taken from the water-heater product fiche

The declared load profile is the load profile applied by the manufacturer when determining the water heater energy efficiency. It is identified in the heater energy label.

Tutorial for the online calculation tool

Water-heater package

Second step: solar device specifications

Solar device

Annual non-solar heat contribution (Q_{nonsol})(in kWh)

1882

Auxiliary electricity consumption (Q_{aux})(in kWh)

116

This value is the annual non-solar (i.e. electricity or/and fuel) heat contribution. This value has to be calculated independently, i.e. with the SOLCAL method (which use collector and heat storage data to determine this value)

This value (expressed in final energy) correspond to the electricity consumed by the pump and the standby mode of the water heater. This value value is also calculated with the SOLCAL methodology.

For SOLCAL methodology, please refer to your manufacturer, supplier or dealer to help you on this. Or download the tool developed by [vAConsult](#)

Tutorial for the online calculation tool

Water-heater package

Third step: heat storage tank or not?

The screenshot shows a form titled "Heat storage tank" with a section "Storage Tank installed ?". It contains two radio buttons: "No" and "Yes", with the "Yes" button selected. Below the form are two buttons: "Calculate" and "PDF". Three callout boxes provide instructions: the first points to the radio buttons, the second points to the "Calculate" button, and the third points to the "PDF" button.

Heat storage tank

Storage Tank installed ?

No

Yes

Calculate PDF

Indicate if a storage tank is part of the heater

« Calculate » allows to have a preview of the label and the possibility to modify the data previously entered.

« PDF » leads to a new page, where you will have to enter data about the water heater package and the supplier.

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Tutorial for the online calculation tool

Water-heater package

Fourth step: Preparing the label in PDF 1/2

Calculating Package Efficiency and Class

For the PDF: Please provide Identifiers for the supplier of the package and for each component

Dealer's and/or supplier's name or trademark ← Your company name

My Company

Model identifier of the preferential heater ← Name or reference of the preferential heater

Pref Heater

Tutorial for the online calculation tool

Water-heater package

Fourth step: Preparing the label in PDF 2/2

Model identifier of additional component (e.g. a solar device)

Solar Device

Model identifier of additional component (e.g. a tank)

Storage tank

Model identifier of additional component (e.g. a temperature control)

Model identifier of additional component (e.g. a supplementary heater)

PDF

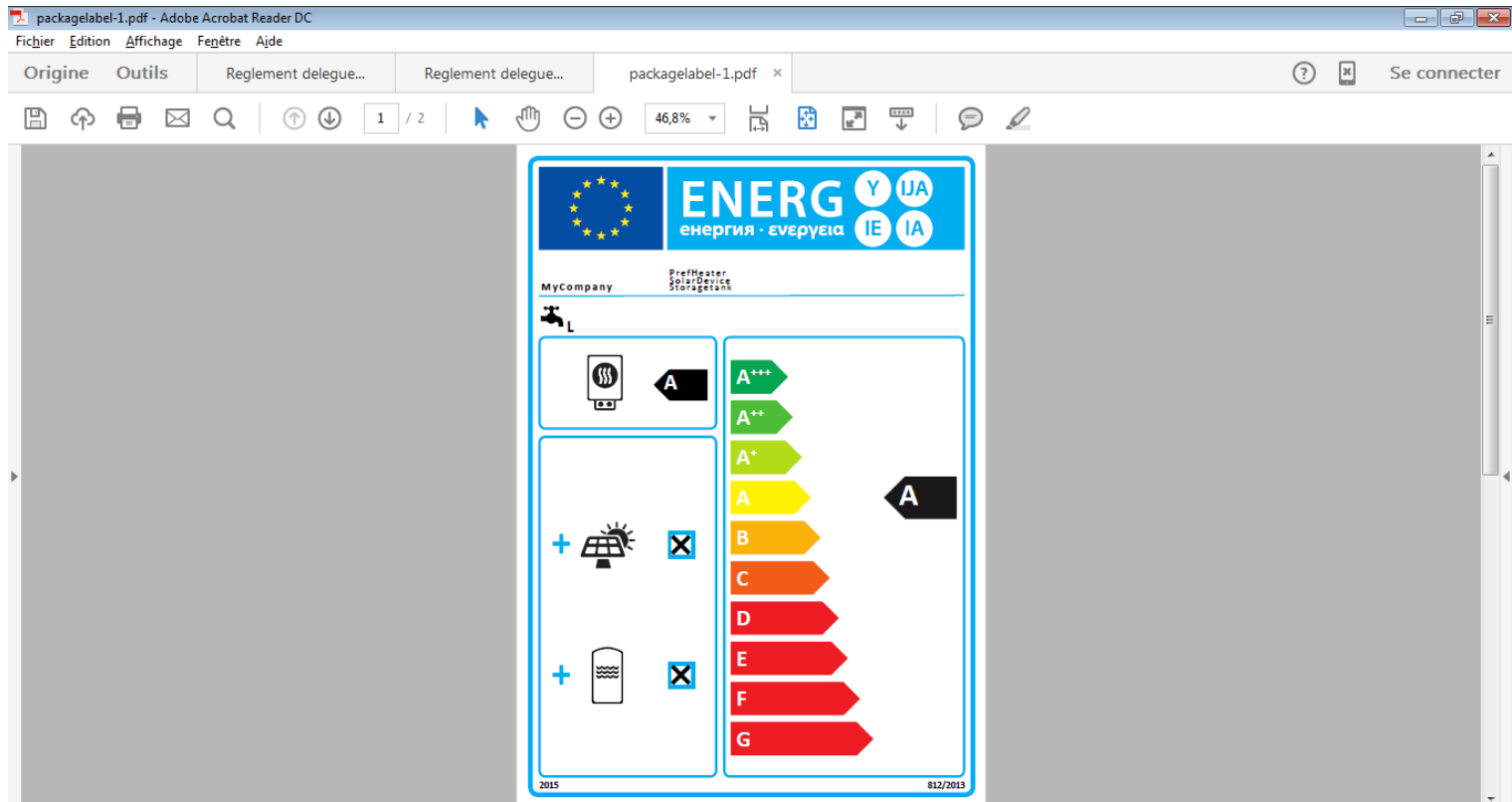
Name or reference of additional component to the preferential heater in order to set the package

Final click to obtain the label in PDF, with the conform layout

Tutorial for the online calculation tool

Water-heater package

Final step: Opening and saving the energy label in PDF



Tutorial for the online calculation tool

Water heater package

Final step: Opening and saving the energy label in PDF

Please note that the PDF contains 2 pages:

- Energy efficiency label
- Package fiche for water heating system

Water heating energy efficiency of water heater 90.0 %

Declared load profile: L

Solar contribution
From fiche of solar device

$$(1,1 \times 90 - 10\%) \times 1,36 - \text{Auxiliary electricity } 11,31 - 90 = + 19,9 \%$$

Water heating energy efficiency of package under average climate 110 %

Water heating energy efficiency class of package under average climate

	G	F	E	D	C	B	A	A*	A**	A***
<input type="checkbox"/> M	<-27%	≈27%	≈30%	≈33%	≈36%	≈39%	≈55%	≈100%	≈130%	≈163%
<input checked="" type="checkbox"/> L	<-27%	≈27%	≈30%	≈34%	≈37%	≈50%	≈75%	≈115%	≈150%	≈188%
<input type="checkbox"/> XL	<-27%	≈27%	≈30%	≈35%	≈38%	≈55%	≈80%	≈123%	≈160%	≈200%
<input type="checkbox"/> XXL	<-28%	≈28%	≈23%	≈36%	≈40%	≈60%	≈85%	≈131%	≈170%	≈213%

Water heating energy efficiency under colder and warmer climate conditions

Colder: 110 - 0.2 x 19,9 = 106 %

Warmer: 110 + 0.4 x 19,9 = 114 %

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 buildings, 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.

Tutorial for the online calculation tool

Space heater package

First step: preferential heater choice

[Back to start](#)

English ▾

Calculating Package Efficiency and Class

What type of package would you like to calculate?

Water Heater **Space Heater ▾** Combination Heater ▾

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- with preferential Boiler
- with preferential Cogeneration Heater
- with preferential Heat Pump

Choose the preferential heater corresponding to your package

Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Second step: heat pump specifications for space heating 1/2

Heat pump space heater

Rated heat output (Prated) of heat pump (in kW)

6

Seasonal space heating energy efficiency of heat pump (in %)

113

Seasonal space heating energy efficiency of heat pump at colder climate (in %)

88

Seasonal space heating energy efficiency of heat pump at warmer climate (in %)

123

This value is taken from the product fiche of the heat pump

These values are taken from the product fiche of the heat pump

Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Second step: heat pump specifications for space heating 2/2

Is it a low temperature heat pump?

No
 Yes

Don't forget to precise if it is a low temperature heat pump

Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Third step: Temperature control device and supplementary boiler?

Temperature control

Temperature Control (Class)

Class VI

If there is a temperature control device, indicate the corresponding class (taken from the temperature control device documentation)

Supplementary boiler

Rated heat output (Prated) of the supplementary boiler (in kW)

Seasonal space heating energy efficiency of supplementary boiler (in %)

If there is a supplementary boiler, indicate the rated output and the energy efficiency, taken from the boiler product fiche

Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Fourth step: solar device specifications

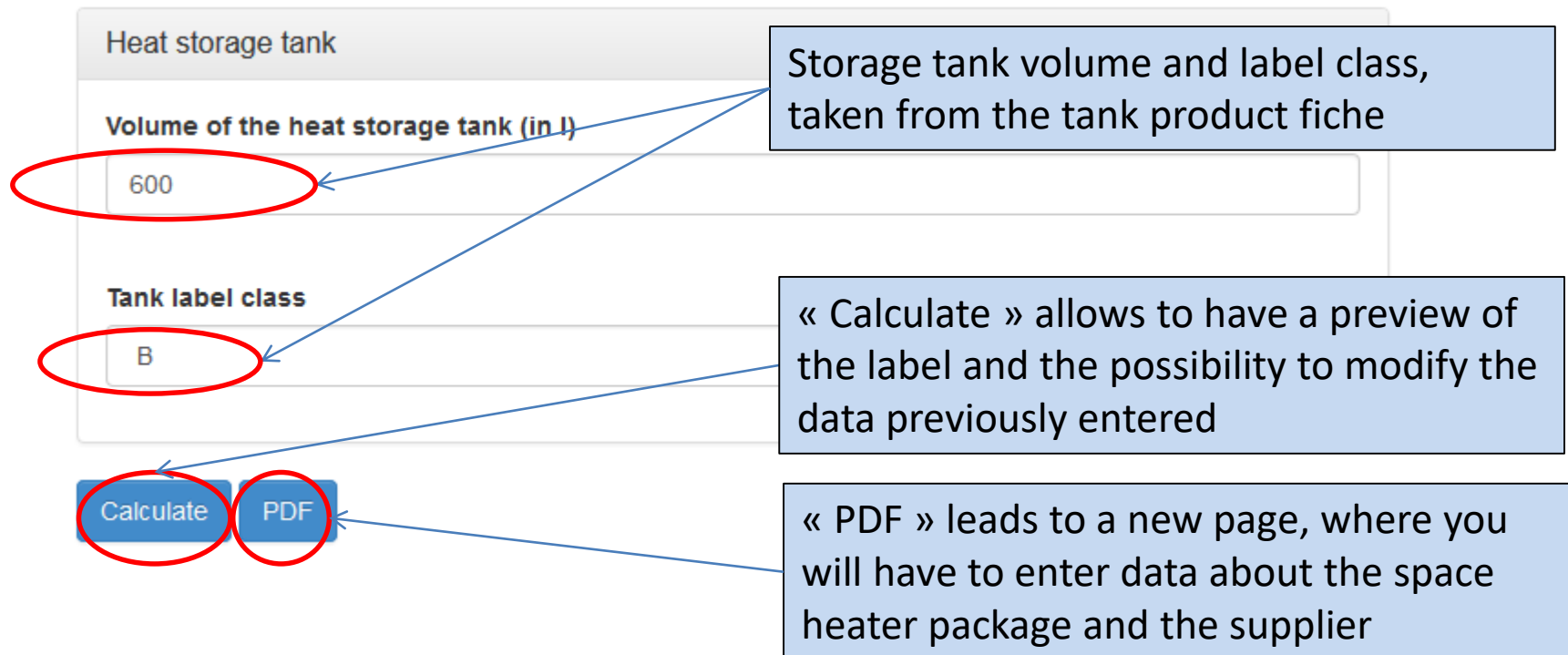
The image shows a screenshot of a web form titled "Solar device". It contains two input fields. The first field is labeled "Solar collector area (in m2)" and contains the value "15". The second field is labeled "Solar collector efficiency (in %)" and contains the value "80". Both values are circled in red. Blue arrows point from the "15" to a text box that says "Solar collector area chosen for the package". Another blue arrow points from the "80" to a text box that says "Solar collector efficiency taken from the collector product fiche".

Parameter	Value	Source
Solar collector area (in m2)	15	Solar collector area chosen for the package
Solar collector efficiency (in %)	80	Solar collector efficiency taken from the collector product fiche

Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Fifth step: storage tank specifications



Heat storage tank

Volume of the heat storage tank (in l)

600

Tank label class

B

Calculate PDF

Storage tank volume and label class, taken from the tank product fiche

« Calculate » allows to have a preview of the label and the possibility to modify the data previously entered

« PDF » leads to a new page, where you will have to enter data about the space heater package and the supplier

Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Sixth step: Preparing the label in PDF 1/2

Calculating Package Efficiency and Class

For the PDF: Please provide Identifiers for the supplier of the package and for each component

Dealer's and/or supplier's name or trademark → Your company name

My Company

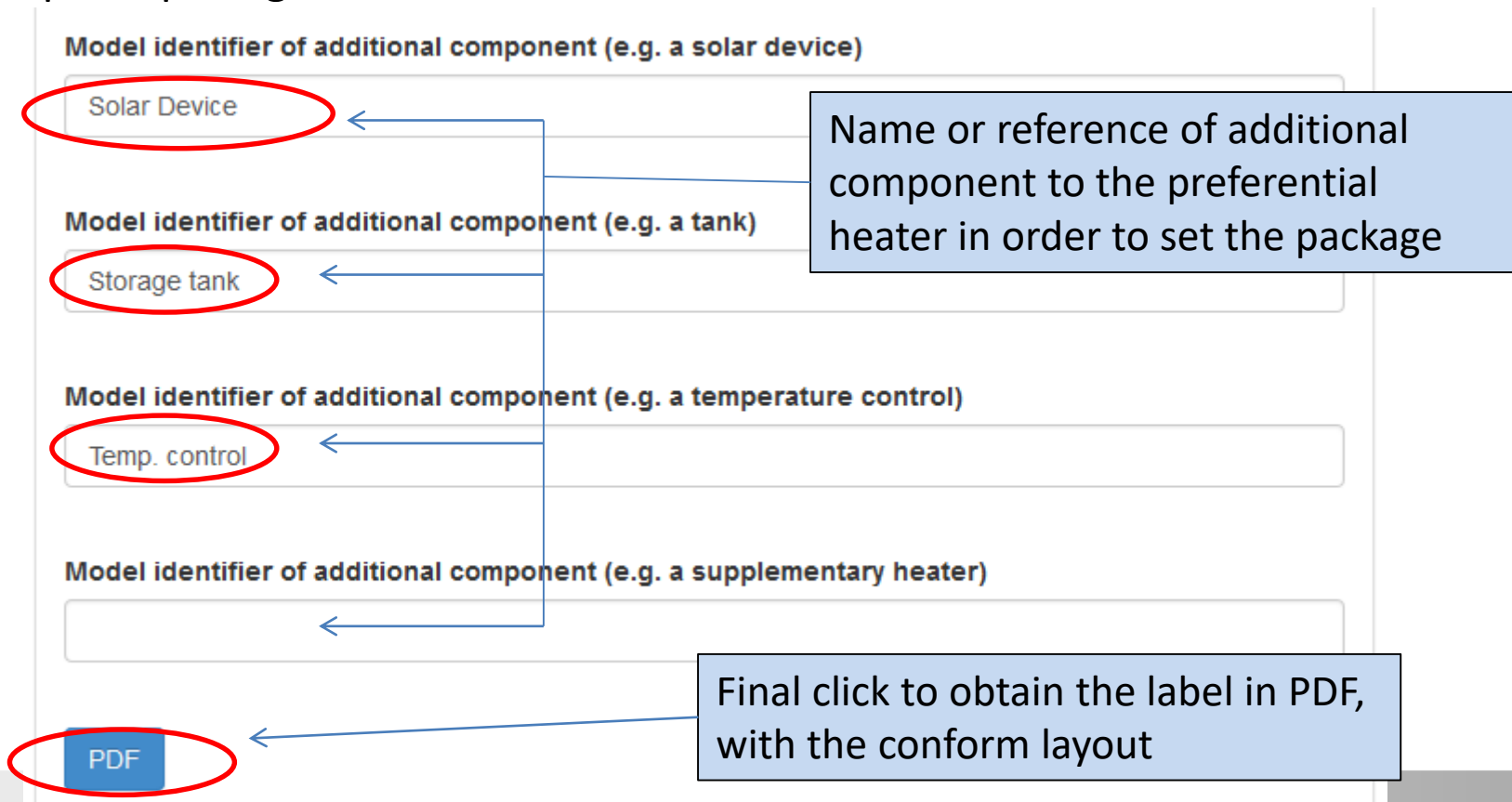
Model identifier of the preferential heater → Name or reference of the preferential heater

Pref Heater

Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Sixth step: Preparing the label in PDF 2/2



Model identifier of additional component (e.g. a solar device)

Solar Device

Model identifier of additional component (e.g. a tank)

Storage tank

Model identifier of additional component (e.g. a temperature control)

Temp. control

Model identifier of additional component (e.g. a supplementary heater)

PDF

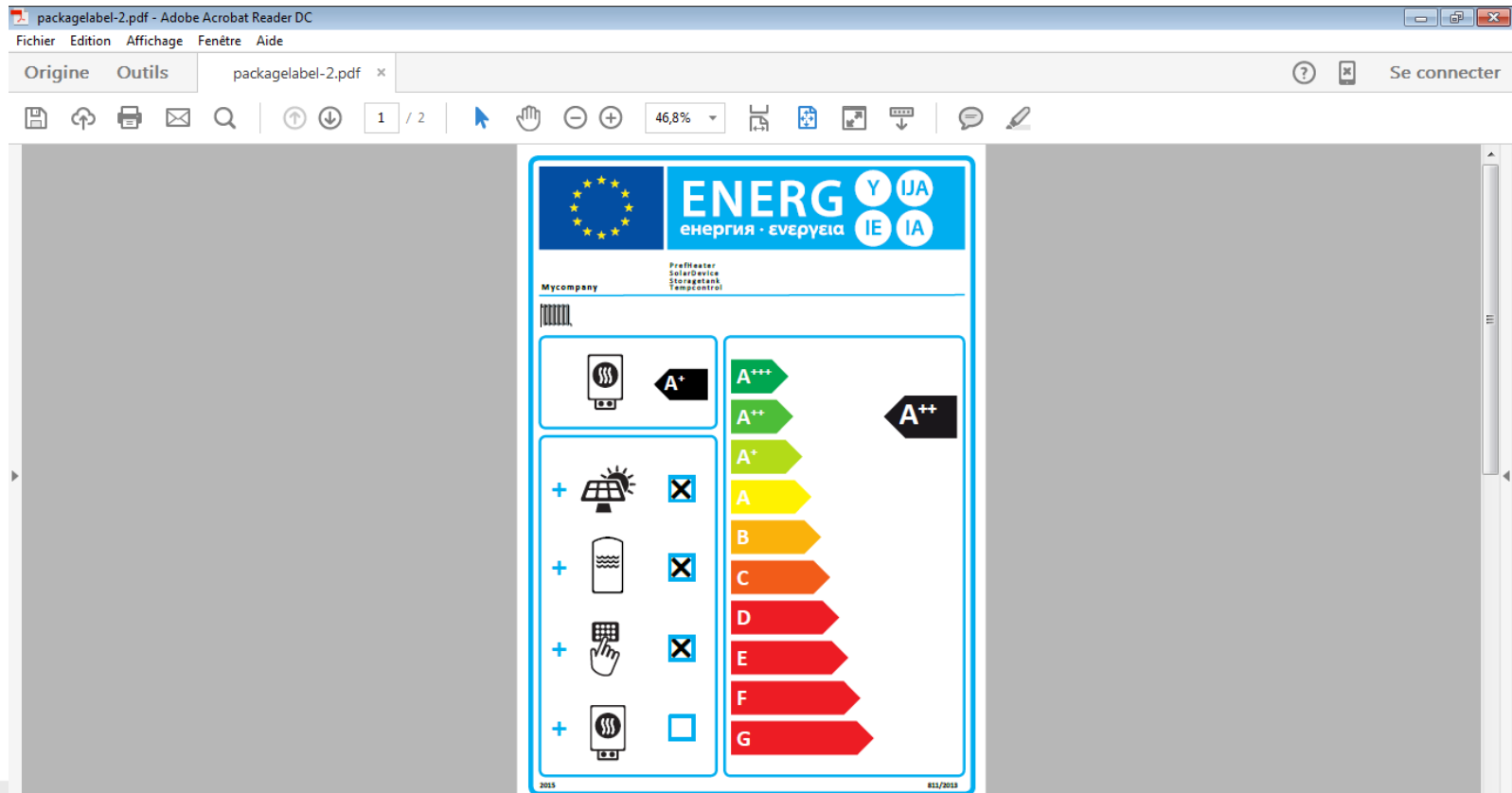
Name or reference of additional component to the preferential heater in order to set the package

Final click to obtain the label in PDF, with the conform layout

Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Final step: Opening and saving the energy label in PDF



Tutorial for the online calculation tool

Space heater package, i.e. with preferential Heat pump

Final step: Opening and saving the energy label in PDF

Please note that the PDF contains 2 pages:

- Energy efficiency label
- Package fiche for space heating system

Seasonal space heating energy efficiency of heat pump 113,0 %

Temperature control
 From fiche of temperature control + 4,0 %

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
 From fiche of boiler + 0,0 %

Seasonal space heating energy efficiency (in %)
 $([0,00] - 113,00) \times 0,00 = + 0,0$

Solar contribution
 From fiche of solar device + 21,0 %

Collector size (in m²) 15,00 Tank volume (in m³) 0,500 Collector efficiency (in %) 60,00 Tank rating 0,86

A+ = 0,95, A = 0,91,
 B = 0,86, C = 0,83,
 D-G = 0,81

$(4,45 \times [15,00] + 1,74 \times [0,500]) \times 0,45 \times ([60,00] / 100) \times [0,86] = + 21,0$

Seasonal space heating energy efficiency of package 138 %

Seasonal space heating energy efficiency class of package

G F E D C B A A+ A++ A+++

<-30% ≥30% ≥34% ≥36% ≥75% ≥82% ≥90% ≥98% ≥125% ≥150%

Seasonal space heating energy efficiency under colder and warmer conditions

Colder: $[138,01] - 25,00 = [113] %$

Warmer: $[138,01] + 10,00 = [148]$

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.

Tutorial for the online calculation tool

Space heater package, with preferential Boiler

Same steps are required. Only the data asked for preferential heater will be different.

It has to be taken from the boiler product fiche.

Calculating Package Efficiency and Class

Boiler space heater
Rated heat output (Prated) of boiler (in kW)
<input type="text"/>
Seasonal space heating energy efficiency of boiler (in %)
<input type="text"/>

Tutorial for the online calculation tool

Space heater package, with preferential Cogeneration heater

Same steps are required. Only the data asked for preferential heater will be different.

It has to be taken from the cogeneration heater product fiche.

Cogeneration space heater

Rated heat output (Prated) of cogeneration space heater (in kW)

Seasonal space heating energy efficiency of cogeneration space heater (in %)

Tutorial for the online calculation tool

Combination heater package

First step: preferential heater choice.

[Back to start](#)

English ▼

Calculating Package Efficiency and Class

What type of package would you like to calculate?

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Choose the preferential heater corresponding to your package

Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Second step: boiler specifications for space and water heating

Boiler combination heater

Rated heat output (Prated) of the boiler combination heater (in kW)

25

Seasonal space heating energy efficiency of the preferential boiler combination heater (in %)

90

Water heating energy efficiency of the combination heater

85

Declared load profile

XL

These values are taken from the boiler combi. Heater product fiche

The declared load profile is the **load profile applied by the manufacturer when determining the water heater energy efficiency. It is identified in the heater energy label.**

Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Third step: Temperature control device and supplementary boiler?

Temperature control

Temperature Control (Class)

Class VI

If there is a temperature control device, indicate the corresponding class (taken from the temperature control device documentation)

Supplementary boiler

Rated heat output (Prated) of the supplementary boiler (in kW)

Seasonal space heating energy efficiency of supplementary boiler (in %)

If there is a supplementary boiler, indicate the rated output and the energy efficiency, taken from the boiler product fiche

Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Fourth step: solar device specifications

Solar device		Solar collector area chosen for the package
Solar collector area (in m ²)	15	Solar collector efficiency taken from the collector product fiche
Solar collector efficiency (in %)	80	This value has to be calculated independently, i.e. with the SOLCAL method (which uses collector and heat storage data to determine this value)
Annual non-solar heat contribution (Q _{nonsol})(in kWh)	1272	This value (expressed in final energy) correspond to the electricity consumed by the pump and the standby. This value is also calculated in the SOLCAL method (refer to your supplier or vAConsult).
Auxiliary electricity consumption (Q _{aux})(in kWh)	150	

Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Fifth step: storage tank specifications

Heat storage tank

Volume of the heat storage tank (in l)

600

Tank label class

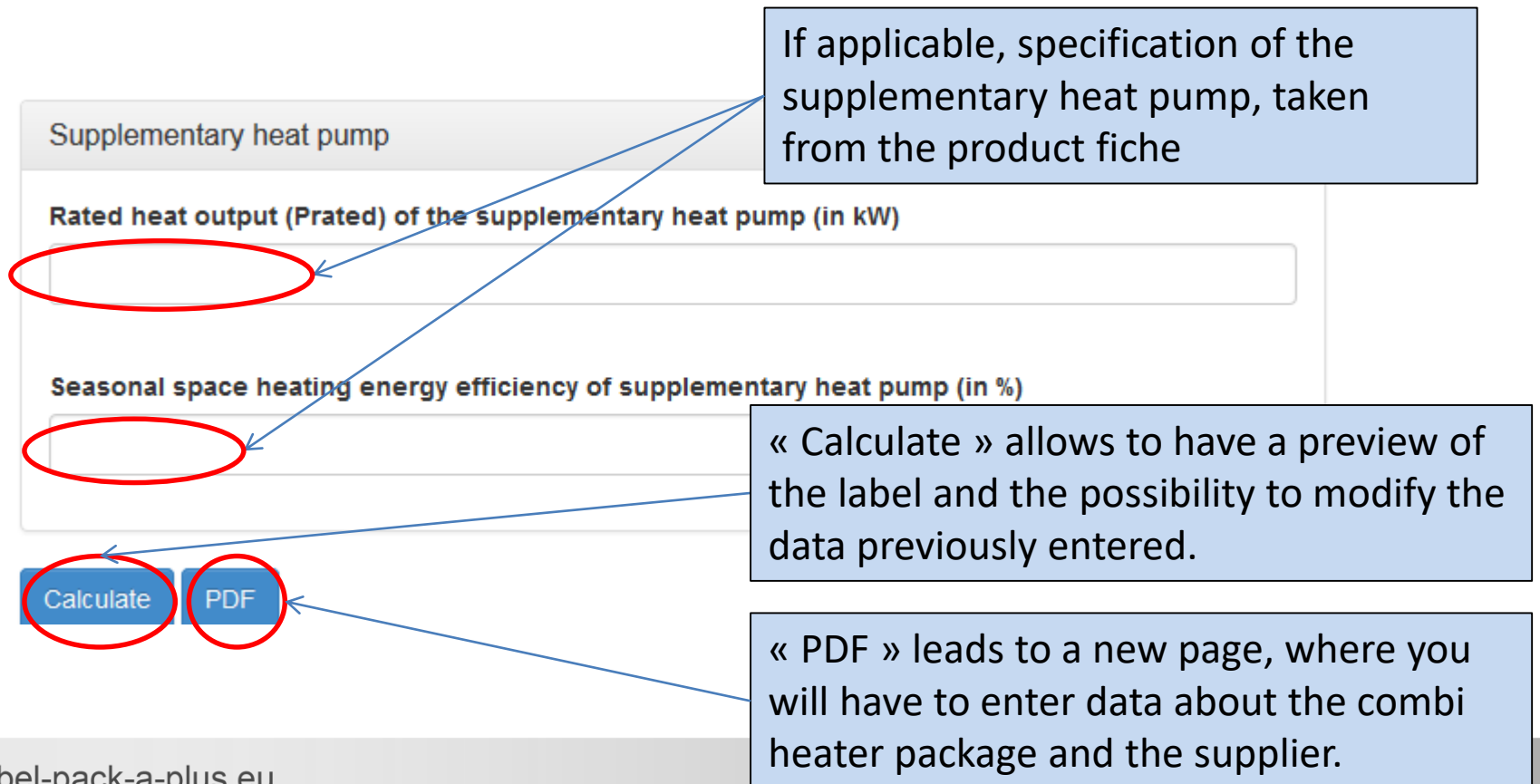
B

Storage tank volume and label class, taken from the tank product fiche

Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Sixth step: supplementary heat pump?



Supplementary heat pump

Rated heat output (Prated) of the supplementary heat pump (in kW)

Seasonal space heating energy efficiency of supplementary heat pump (in %)

Calculate PDF

If applicable, specification of the supplementary heat pump, taken from the product fiche

« Calculate » allows to have a preview of the label and the possibility to modify the data previously entered.

« PDF » leads to a new page, where you will have to enter data about the combi heater package and the supplier.

Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Seventh step: Preparing the label in PDF 1/2

Calculating Package Efficiency and Class

For the PDF: Please provide Identifiers for the supplier of the package and for each component

Dealer's and/or supplier's name or trademark ← Your company name

My Company

Model identifier of the preferential heater ← Name or reference of the preferential heater

Pref Heater

Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Seventh step: Preparing the label in PDF 2/2

Model identifier of additional component (e.g. a solar device)

Solar Device

Model identifier of additional component (e.g. a tank)

Storage tank

Model identifier of additional component (e.g. a temperature control)

Temp. control

Model identifier of additional component (e.g. a supplementary heater)

PDF

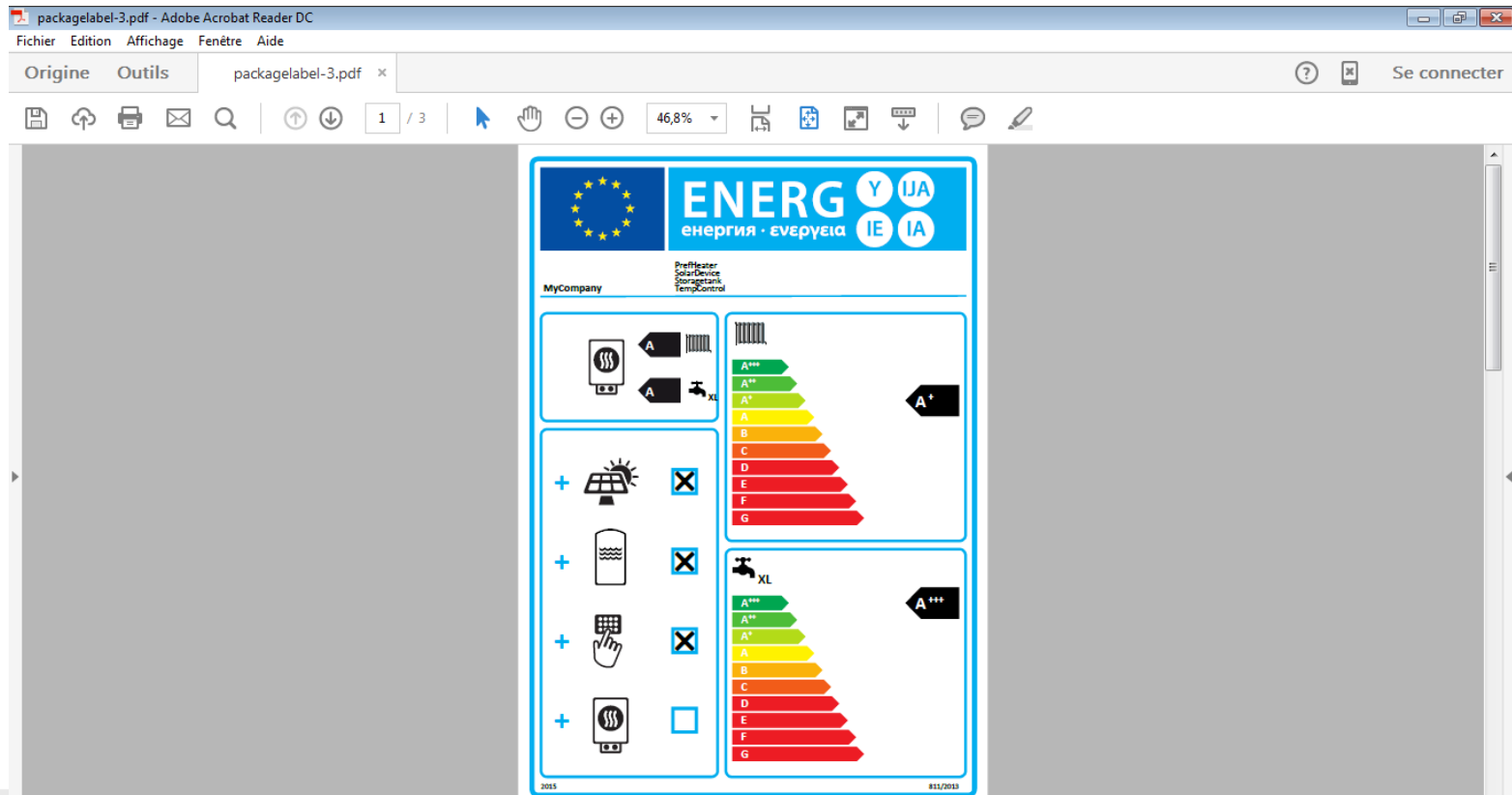
Name or reference of additional component to the preferential heater in order to set the package

Final click to obtain the label in PDF, with the conform layout

Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Final step: Opening and saving the energy label in PDF



Tutorial for the online calculation tool

Combination heater package, i.e. with preferential Boiler

Final step: Opening and saving the energy label in PDF

Please note that the PDF contains 3 pages:

- Energy efficiency label
- Package fiche for space heating
- Package fiche for water heating

Seasonal space heating energy efficiency of boiler 90,0 %

Temperature control 4,0 %

From fiche of temperature control + 4,0 %

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 0,0 %

From fiche of boiler + 0,0 %

Seasonal space heating energy efficiency (in %)

(0,00 - 90,00) x 0,1 - + 0,0 %

Solar contribution 10,1 %

From fiche of solar device

Collector size (in m²) 15,00 Tank volume (in m³) 0,600 Collector efficiency (in %) 80,00 Tank rating A = 0,95, A = 0,91, B = 0,86, C = 0,83, D-G = 0,81

(1,07 x 15,00 + 0,42 x 0,600) x 0,9 x (80,00 / 100) x 0,86 - + 10,1 %

Supplementary heat pump 0,0 %

From fiche of heat pump + 0,0 %

Seasonal space heating energy efficiency (in %)

(0 - 90,00) x 0,00 - + 0,0 %

Solar contribution AND Supplementary heat pump 0,0 %

Select smaller value 0,5 x 10,09 OR 0,5 x 0,00 - + 0,0 %

Seasonal space heating energy efficiency of package 104 %

Seasonal space heating energy efficiency class of package

G F E D C B A A+ A++ A+++

<-30% ≥30% ≥34% ≥36% ≥75% ≥82% ≥90% ≥96% ≥125% ≥150%

Boiler and supplementary heat pump installed with low temperature heat emitters at 35 °C?

From fiche of heat pump 104,00 + (50 x 0,00) - 0 %

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 buildings, 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.

Water heating energy efficiency of combination heater 85,0 %

Declared load profile: XL

Solar contribution 181,5 %

From fiche of solar device

Auxiliary electricity 8,94

(1,1 x 85 - 10 %) x 3,30 - 8,94 - 85 - + 181,5 %

Water heating energy efficiency of package under average climate 266 %

Water heating energy efficiency class of package under average climate

G F E D C B A A+ A++ A+++

<input type="checkbox"/> M	<-27%	≥27%	≥30%	≥33%	≥36%	≥39%	≥65%	≥100%	≥130%	≥163%
<input type="checkbox"/> L	<-27%	≥27%	≥30%	≥34%	≥37%	≥50%	≥75%	≥115%	≥150%	≥188%
<input checked="" type="checkbox"/> XL	<-27%	≥27%	≥30%	≥35%	≥38%	≥55%	≥80%	≥123%	≥160%	≥200%
<input type="checkbox"/> XXL	<-26%	≥26%	≥23%	≥36%	≥40%	≥60%	≥85%	≥131%	≥170%	≥213%

Water heating energy efficiency under colder and warmer climate conditions

Colder: 266 - 0.2 x 181,5 = 230 %

Warmer: 266 + 0.4 x 181,5 = 303 %

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 buildings, 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.

Tutorial for the online calculation tool

Combination heater package, with preferential Heat pump

Same steps are required. Only the data asked for preferential heater will be different.

It has to be taken from the heat pump product fiche.

Heat pump combination heater

Specifications related to space heating
<http://www.label-pack-a-plus.eu/contact/>

Rated heat output (Prated) of the preferential heat pump combination heater (in kW)

Seasonal space heating energy efficiency of the preferential heat pump combination heater (in %)

Seasonal space heating energy efficiency of the preferential heat pump combination heater at colder climate (in %)

Seasonal space heating energy efficiency of the preferential heat pump combination heater at warmer climate (in %)

Specifications related to water heating

Is it a low temperature heat pump?

No
 Yes

Water heating energy efficiency of the combination heater

Declared load profile

TECHNICAL SUPPORT



If you have further inquiries on the European project LabelPackA+, please fill in the following form:

First name*	Name*
<input type="text"/>	<input type="text"/>
Company/Organisation/Institution	
<input type="text"/>	
Street/PostBox	ZIP Code
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City	Country
<input type="text"/>	<input type="text"/>
Telephone	Telefax
<input type="text"/>	<input type="text"/>
eMail*	
<input type="text"/>	
Website	
<input type="text"/>	
National stakeholder you like to contact*	
<input type="text"/>	
Subject	
<input type="text"/>	
Your Request*	
<input type="text"/>	

Any questions or comments can be sent using the “Contact” section of the Labelpack A+ website

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