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European Product Registry for Energy Labelling (EPREL)

Water Heaters

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1.1. Document History

Version	Date	Comment
1.00	23/07/2018	Draft Document created by Oscar Miralles (OM)

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1.2. Bibliography

- [1] EPREL, *Bussiness Glossary*, 2016.
- [2] EPREL, *COMMISSION DELEGATED REGULATION (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heate.*
- [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. WATER HEATERS

COMMISSION DELEGATED REGULATION (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device [2].

These product group concerns 4 types of products "Water heaters", "Hot water storage tanks", "Solar devices", "Packages of water heater and solar device". They will have separate Product Information Sheets.

This document is intended only for "Water heaters".

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 "WaterHeater". 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, a short description how it's filled or the units used, and field in the data exchange model.

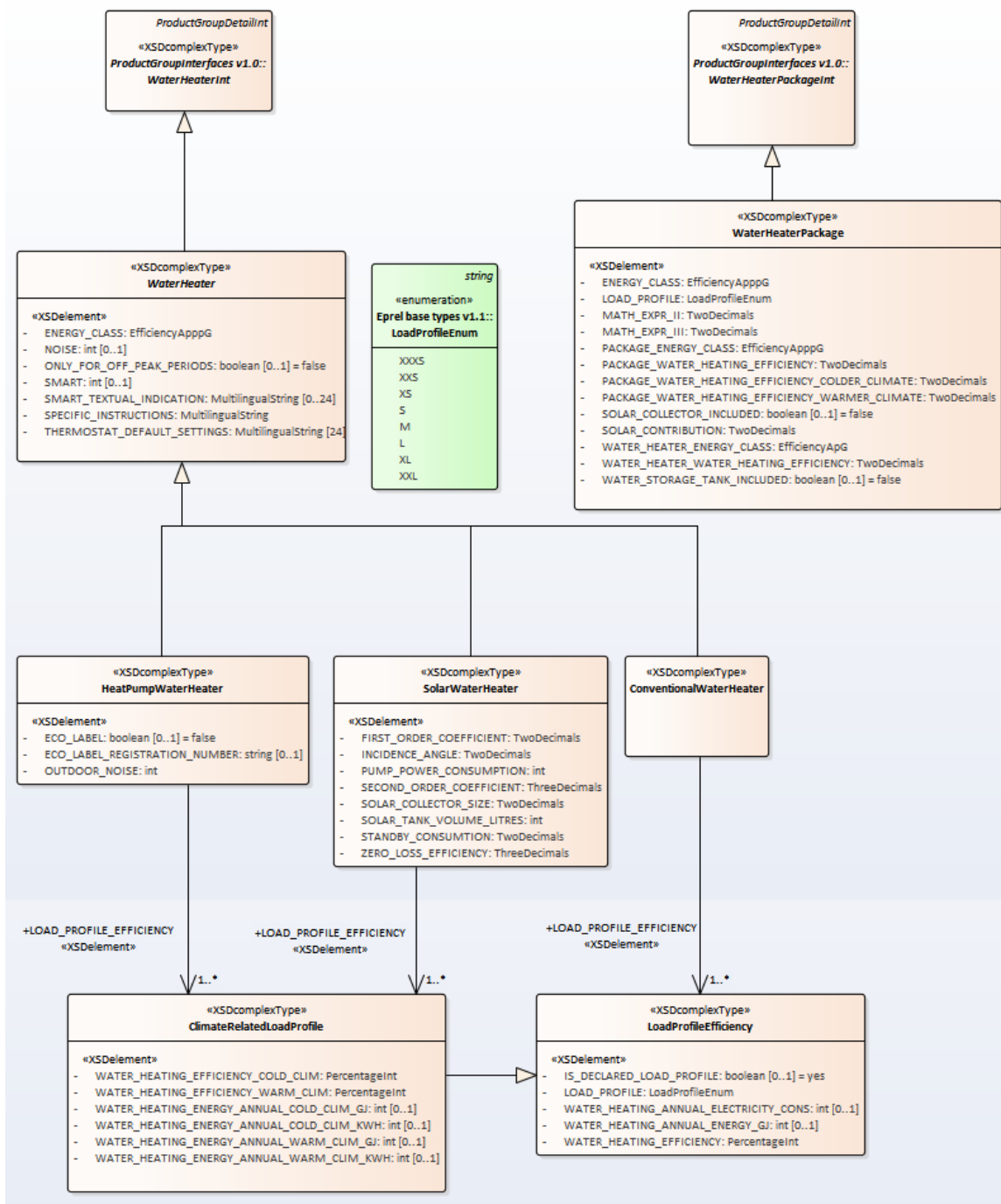


Figure 1 Exchange model

Item	Field	Type	Mandatory	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	List: <ul style="list-style-type: none"> • Conventional water heaters • Solar water heaters • Heat pump water heaters 	
1.1(d)	Water heating energy efficiency class (average climate conditions)	List	TRUE	List of classes (Point 1 of Annex II)	ENERGY_CLASS
1.1(i)	Sound power level (Indoors)	Number (No decimals)	FALSE	dB	NOISE
1.1(j)	Able to work only during off-peak hours	Boolean	FALSE	Default (False)	ONLY_FOR_OFF_PEAK_PERIODS
1.1(l)	Smart	Number (No decimals)	FALSE	If “1” add an indication in fiche.	SMART
Declared load profile (Mandatory)					
	Is declared profile?	Boolean	FALSE	TRUE Declared profile is mandatory always.	IS_DECLARED_LOAD_PROFILE
1.1(c)	Load profile	List	TRUE	List of profiles from Table 3 of Annex VII: <ul style="list-style-type: none"> • 3XS • XXS • XS • S • M • L • XL • XXL 	LOAD_PROFILE
1.1(e)	Water heating energy efficiency (average climate conditions)	Number (No decimals)	TRUE	%	WATER_HEATING_EFFICIENCY

Item	Field	Type	Mandatory	Description	Exchange model
1.1(f)	Annual electricity consumption (average climate conditions)	Number (No decimals)	FALSE	kWh	WATER_HEATING_ ANNUAL_ELECTRICITY_ CONS
	Annual fuel consumption (average climate conditions)	Number (No decimals)	FLASE	GJ	WATER_HEATING_ ANNUAL_ENERGY_GJ
1.1(m)	Water heating energy efficiency (colder climate conditions)	Number (No decimals)	TRUE	% Type = "Solar water heaters" or "Heat pump water heaters"	WATER_HEATING_ EFFICIENCY_COLD_ CLIM
	Water heating energy efficiency (warmer climate conditions)	Number (No decimals)	TRUE	% Type = "Solar water heaters" or "Heat pump water heaters"	WATER_HEATING_ EFFICIENCY_WARM_ CLIM
1.1(n)	Annual electricity consumption (colder climate conditions)	Number (No decimals)	FLASE	kWh Type = "Solar water heaters" or "Heat pump water heaters"	WATER_HEATING_ ENERGY_ ANNUAL_ COLD_CLIM_KWH
	Annual fuel consumption (colder climate conditions)	Number (No decimals)	FLASE	GJ Type = "Solar water heaters" or "Heat pump water heaters"	WATER_HEATING_ ENERGY_ ANNUAL_ COLD_CLIM_GJ
	Annual electricity consumption (warmer climate conditions)	Number (No decimals)	FLASE	kWh Type = "Solar water heaters" or "Heat pump water heaters"	WATER_HEATING_ ENERGY_ ANNUAL_ WARM_CLIM_KWH
	Annual fuel consumption (warmer climate conditions)	Number (No decimals)	FLASE	GJ Type = "Solar water heaters" or "Heat pump water heaters"	WATER_HEATING_ ENERGY_ ANNUAL_ WARM_CLIM_GJ
Other load profiles (Optional)					
	Is declared profile?	Boolean	FALSE	FALSE Other profiles are not the Declared.	IS_DECLARED_ LOAD_PROFILE

Item	Field	Type	Mandatory	Description	Exchange model
1.1(c) 1.1(g)	Load profile	List	TRUE	List of profiles from Table 3 of Annex VII: <ul style="list-style-type: none">• 3XS• XXS• XS• S• M• L• XL• XXL Should be different than the Declared profile.	LOAD_PROFILE
1.1(e) 1.1(g)	Water heating energy efficiency (average climate conditions)	Number (No decimals)	TRUE	%	WATER_HEATING_EFFICIENCY
1.1(f) 1.1(g)	Annual electricity consumption (average climate conditions)	Number (No decimals)	FALSE	kWh	WATER_HEATING_ANNUAL_ELECTRICITY_CONS
	Annual fuel consumption (average climate conditions)	Number (No decimals)	FALSE	GJ	WATER_HEATING_ANNUAL_ENERGY_GJ
Language fields (Add button will allow to add language versions for the next fields)					
	Language	List	TRUE	List of 24 languages.	lang
1.1(h)	Thermostat temperature settings	Text	TRUE		THERMOSTAT_DEFAULT_SETTINGS
1.1(k)	Specific precautions	Text	TRUE		SPECIFIC_INSTRUCTIONS
	Smart declaration	Text	TRUE	If Smart = TRUE, add a textual explanation	SMART_TEXTUAL_INDICATION
Solar water heaters					
1.1(o)	Collector aperture	Number (2 decimals)	TRUE	m2 Type = "Solar water heaters"	SOLAR_COLLECTOR_SIZE

Item	Field	Type	Mandatory	Description	Exchange model
1.1(p)	Zero-loss efficiency	Number (3 decimals)	TRUE	% ??? Type = "Solar water heaters"	ZERO_LOSS_ EFFICIENCY
1.1(q)	First-order coefficient	Number (2 decimals)	TRUE	W/(m2 K) Type = "Solar water heaters"	FIRST_ORDER_ COEFFICIENT
1.1(r)	Second-order coefficient	Number (3 decimals)	TRUE	W/(m2 K2) Type = "Solar water heaters"	SECOND_ORDER_ COEFFICIENT
1.1(s)	Incidence angle modifier	Number (2 decimals)	TRUE	Type = "Solar water heaters"	INCIDENCE_ANGLE
1.1(t)	Storage volume	Number (No decimals)	TRUE	Litters Type = "Solar water heaters"	SOLAR_TANK_ VOLUME_LITRES
1.1(u)	Pump power consumption	Number (No decimals)	TRUE	W Type = "Solar water heaters"	PUMP_POWER_ CONSUMPTION
1.1(v)	Standby power consumption	Number (2 decimals)	TRUE	W Type = "Solar water heaters"	STANDBY_CONSUMPTION
Heat pump water heaters					
1.1(w)	Sound power level (Outdoors)	Number (No decimals)	TRUE	dB Type = "Heat pump water heaters"	OUTDOOR_NOISE
Annex III 1.1.3	EU eco-label	Boolean	FALSE	Default (False)	ECO_LABEL
	EU eco-label Registration Number	Text	FALSE	Licence Number (SUPPLIER WILL UPLOAD THE LABEL IN PDF IF IMAGE IS NEEDED)	ECO_LABEL_ REGISTRATION_NUMBER

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.

A Web Page
http://

EPREL Compliance website
English
(minutes) MOVIE SPD 2.001

Water heaters

Delegated Regulation 812/2013

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

General information

Date of placement on the market

Date of end of placement on the market

☒ Conventional water heaters
 ☐ Solar water heaters
 ☐ Heat pump water heaters

Water heating energy efficiency class (average climate conditions)

Sound power level (Indoors) (dB)

☐ Able to work only during off-peak hours

Smart

Declared profile

Load profile

Water heating energy efficiency (average climate conditions) (%)

Annual electricity consumption (average climate conditions) (kWh)

Annual fuel consumption (average climate conditions) (GJ)

Add profile

Other profiles

Load profile

Water heating energy efficiency (average climate conditions) (%)

Annual electricity consumption (average climate conditions) (kWh)

Annual fuel consumption (average climate conditions) (GJ)

Add language

Specific precautions

Language

Thermostat temperature settings

Specific precautions

Smart declaration

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

Figure 2 Water heaters – Conventional

A Web Page
http://

EPREL Compliance website
English
(minutes) MOVIE SPD 2.001

Water heaters

Delegated Regulation 812/2013

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

EditBack

General information

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

Conventional water heaters
Solar water heaters
Heat pump water heaters

Water heating energy efficiency class (average climate conditions) A++
Sound power level (Indoors) (dB) 65
☐ Able to work only during off-peak hours
Smart 1

Declared profile

Load profile 3XS
Water heating energy efficiency (average climate conditions) (%) 65
Annual electricity consumption (average climate conditions) (kWh) 65
Annual fuel consumption (average climate conditions) (GJ) 65
Water heating energy efficiency (colder climate conditions) (%) 65
Water heating energy efficiency (warmer climate conditions) (%) 65
Annual electricity consumption (colder climate conditions) (kWh) 65
Annual fuel consumption (colder climate conditions) (GJ) 65
Annual electricity consumption (warmer climate conditions) (kWh) 65
Annual fuel consumption (warmer climate conditions) (GJ) 65

Add profile

Other profiles

Load profile XXS
Water heating energy efficiency (average climate conditions) (%) 65
Annual electricity consumption (average climate conditions) (kWh) 65
Annual fuel consumption (average climate conditions) (GJ) 65

Remove profile

Add language

Specific precautions

Language Spanish
Thermostat temperature settings
Specific precautions
Smart declaration

Remove language

Collector aperture (m2) 65.12
Zero-loss efficiency (%) 65.123
First-order coefficient (W/(m2 K)) 65.12
Second-order coefficient (W/(m2 K)) 65.123
Incidence angle modifier 65.12
Storage volume (Liters) 65
Pump power consumption (W) 65
Standby power consumption (W) 65.12

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 Water heaters - Solar

A Web Page

http://

European Commission EPREL Compliance website

English (minutes) MOVIE SRD 2.001

Water heaters

Delegated Regulation 812/2013 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 / /

Conventional water heaters Solar water heaters **Heat pump water heaters**

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

Sound power level (Indoors) (dB) 65

☐ Able to work only during off-peak hours

Smart 1

Declared profile

Load profile 3XS

Water heating energy efficiency (average climate conditions) (%) 65

Annual electricity consumption (average climate conditions) (kWh) 65

Annual fuel consumption (average climate conditions) (GJ) 65

Water heating energy efficiency (colder climate conditions) (%) 65

Water heating energy efficiency (warmer climate conditions) (%) 65

Annual electricity consumption (colder climate conditions) (kWh) 65

Annual fuel consumption (colder climate conditions) (GJ) 65

Annual electricity consumption (warmer climate conditions) (kWh) 65

Annual fuel consumption (warmer climate conditions) (GJ) 65

Add profile

Other profiles

Load profile XXS

Water heating energy efficiency (average climate conditions) (%) 65

Annual electricity consumption (average climate conditions) (kWh) 65

Annual fuel consumption (average climate conditions) (GJ) 65

Remove profile

Add language

Specific precautions

Language Spanish

Remove language

Thermostat temperature settings

Specific precautions

Smart declaration

Sound power level (Outdoors) (dB) 65

☐ EU Eco Label

EU Eco Label Registration Number

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 4 Water heaters - Heat pump

3.3. Labels

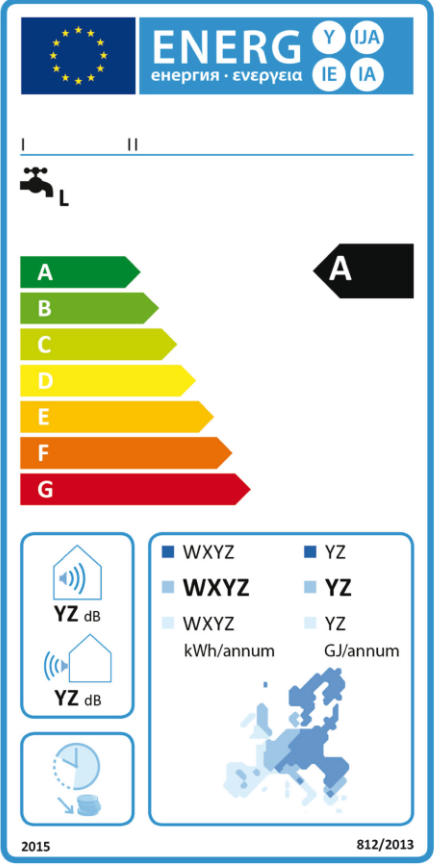
Description of the labels can be found in Annex III of the regulation.

This is a summary of which one has to be generated by the system depending on the date the model was published; followed by images of the labels.

Placement on the market		
Label	Date From	Date To
1. WATER HEATERS		
1.1. Label 1	26/09/2015	25/09/2017
1.1.1. Conventional water heaters in water heating energy efficiency classes A to G		
1.1.2. Solar water heaters in water heating energy efficiency classes A to G		
1.1.3. Heat pump water heaters in water heating energy efficiency classes A to G		
1.2. Label 2	26/09/2017	Onwards
1.2.1. Conventional water heaters in water heating energy efficiency classes A+ to F		
1.2.2. Solar water heaters in water heating energy efficiency classes A+ to F		
1.2.3. Heat pump water heaters in water heating energy efficiency classes A+ to F		

1.1 Label 1

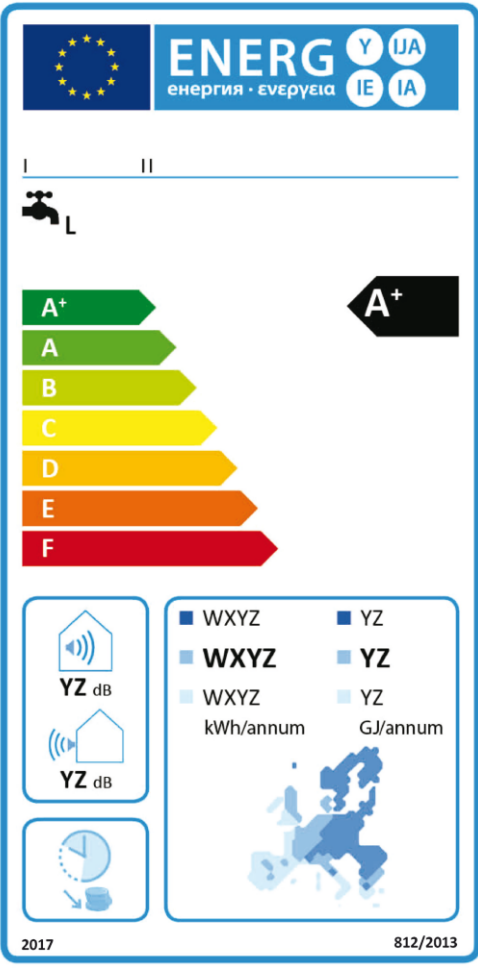
<p>1.1.1</p>	<p>1.1.2</p>
<p>1.1.3</p>	

 <p>The image shows a standard European Energy Label for water heaters. At the top, it features the EU flag and the word 'ENERG' in large letters, with 'енергия · ενεργεια' below it. To the right of 'ENERG' are four small circles containing the letters Y, IJA, IE, and IA. Below this, there are two horizontal lines labeled I and II. A tap icon with the letter 'L' is shown. The main part of the label is a vertical bar with seven colored segments labeled A through G, representing efficiency classes. A black arrow points to the 'A' segment. To the right of the bar, the letter 'A' is displayed in a black box. Below the bar, there are three icons: a house with sound waves, a house with sound waves and a clock, and a clock. To the right of these icons are the labels 'YZ dB' and 'YZ dB'. Below these labels is a map of Europe with a color scale from blue to red, representing energy consumption. To the right of the map are the labels 'WXYZ kWh/annum' and 'YZ GJ/annum'. At the bottom left, the year '2015' is shown, and at the bottom right, the standard number '812/2013' is shown.</p>	<p>I, II</p> <p>III</p> <p>IV</p> <p>VII, V</p> <p>VIII, VI</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------

1.2 Label 2

1.2.1	1.2.2
-------	-------

<div data-bbox="220 152 660 1025"> <p>The label features the EU flag and 'ENERG' logo with 'Y IJA' and 'IE IA' icons. It includes a tap icon with 'L' and a scale from I to II. A vertical bar shows efficiency levels A+ (green) to F (red), with A+ highlighted. Below are icons for sound power level (YZ dB) and energy efficiency class (WXYZ kWh/annum, YZ GJ/annum). The bottom shows the year 2017 and standard 812/2013.</p> </div>	<div data-bbox="839 152 1279 1025"> <p>The label features the EU flag and 'ENERG' logo with 'Y IJA' and 'IE IA' icons. It includes a tap icon with 'L' and a scale from I to II. A vertical bar shows efficiency levels A+ (green) to F (red), with A+ highlighted. Below are icons for sound power level (YZ dB) and energy efficiency class (WXYZ kWh/annum, YZ GJ/annum). A map of Europe is shown at the bottom. The bottom shows the year 2017 and standard 812/2013.</p> </div>
<p>1.2.3</p>	

	<div>I, II</div> <div>III</div> <div>IV</div> <div>VII, V</div> <div>VIII, V</div>
------------------------------------------------------------------------------------	------------------------------------------------------------------------------------

3.4. Product Information Sheet

This is a template of the product information sheet using the fields from the Annex IV “Product fiche”.

Product Information Sheet	
Delegated Regulation (EU)	812/2013
Common info	
Supplier name or trademark	[Supplier name or trademark]
Model identifier	[Model identifier]
Declared load profile	[Declared load profile]
Water heating energy efficiency class (average climate conditions)	[Water heating energy efficiency class (average climate conditions)]
Water heating energy efficiency (average climate conditions)	[Water heating energy efficiency (average climate conditions)] %
Annual electricity consumption (average climate conditions)	[Annual electricity consumption (average climate conditions)] kWh
Annual fuel consumption (average climate conditions)	[Annual fuel consumption (average climate conditions)] GJ

<i>(Repeat this section as many times as Other Load profiles)</i>	
Other load profiles	
Load profile	[Load profile]
Water heating energy efficiency (average climate conditions)	[Water heating energy efficiency (average climate conditions)] %
Annual electricity consumption (average climate conditions)	[Annual electricity consumption (average climate conditions)] kWh
Annual fuel consumption (average climate conditions)	[Annual fuel consumption (average climate conditions)] GJ
<i>(End other load profiles)</i>	
Thermostat temperature settings	<i>(In language selected or EN, if not exist, use the first language version added, and if nothing then leave empty)</i> [Thermostat temperature settings]
Sound power level (Indoors)	[Sound power level (Indoors)] dB
<i>(Row to be shown only if [Able to work only during off-peak hours] = TRUE)</i>	
This water heater is able to work only during off-peak hours.	
Specific precautions	<i>(In language selected or EN, if not exist, use the first language version added, and if nothing then leave empty)</i> [Specific precautions]
<i>(Row to be shown only if [Smart] = 1)</i>	
[Smart declaration]	
<i>(Section to be shown only for [Type]="Heat pump water heaters")</i>	
Heat pump water heater	
Water heating energy efficiency (colder climate conditions)	[Water heating energy efficiency (colder climate conditions)] %
Water heating energy efficiency (warmer climate conditions)	[Water heating energy efficiency (warmer climate conditions)] %
Annual electricity consumption (colder climate conditions)	[Annual electricity consumption (colder climate conditions)] kWh
Annual fuel consumption (colder climate conditions)	[Annual fuel consumption (colder climate conditions)] GJ
Annual electricity consumption (warmer climate conditions)	[Annual electricity consumption (warmer climate conditions)] kWh
Annual fuel consumption (warmer climate conditions)	[Annual fuel consumption (warmer climate conditions)] GJ
Sound power level (Outdoors)	[Sound power level (Outdoors)] dB
<i>(Section to be shown only for [Type]="Solar water heaters")</i>	
Solar water heater	
Water heating energy efficiency (colder climate conditions)	[Water heating energy efficiency (colder climate conditions)] %
Water heating energy efficiency (warmer climate conditions)	[Water heating energy efficiency (warmer climate conditions)] %
Annual electricity consumption (colder climate conditions)	[Annual electricity consumption (colder climate conditions)] kWh

conditions)	conditions)] kWh
Annual fuel consumption (colder climate conditions)	[Annual fuel consumption (colder climate conditions)] GJ
Annual electricity consumption (warmer climate conditions)	[Annual electricity consumption (warmer climate conditions)] kWh
Annual fuel consumption (warmer climate conditions)	[Annual fuel consumption (warmer climate conditions)] GJ
Collector aperture	[Collector aperture] m ²
Zero-loss efficiency	[Zero-loss efficiency] %
First-order coefficient	[First-order coefficient] W/(m ² x K)
Second-order coefficient	[Second-order coefficient] W/(m ² x K)
Incidence angle modifier	[Incidence angle modifier]
Storage volume	[Storage volume] Liters
Pump power consumption	[Pump power consumption] W
Standby power consumption	[Standby power consumption] W