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European Product Registry for Energy Labelling (EPREL)

Water Heaters

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| Revised by: |  |
| Approved by: |  |
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## Document History

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

## Abbreviations and Glossary

See document "EPREL – Business Glossary" [1]

# 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.

# 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”.

## 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.

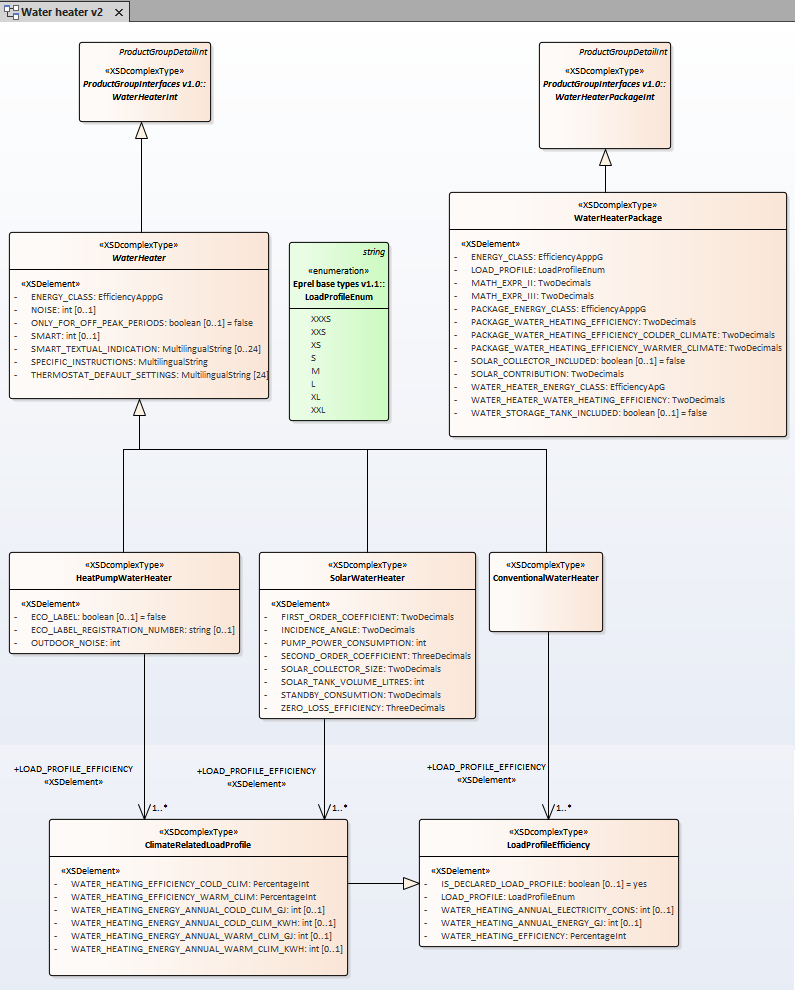


Figure 1 Exchange model

| 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 |  |  |
|  | Type | List | TRUE | List:   * 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:   * 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 |
| 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 |
| 1.1(c)  1.1(g) | Load profile | List | TRUE | List of profiles from Table 3 of Annex VII:   * 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) | FLASE | 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 |
| 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\_CONSUMTION |
| 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 |

## 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.

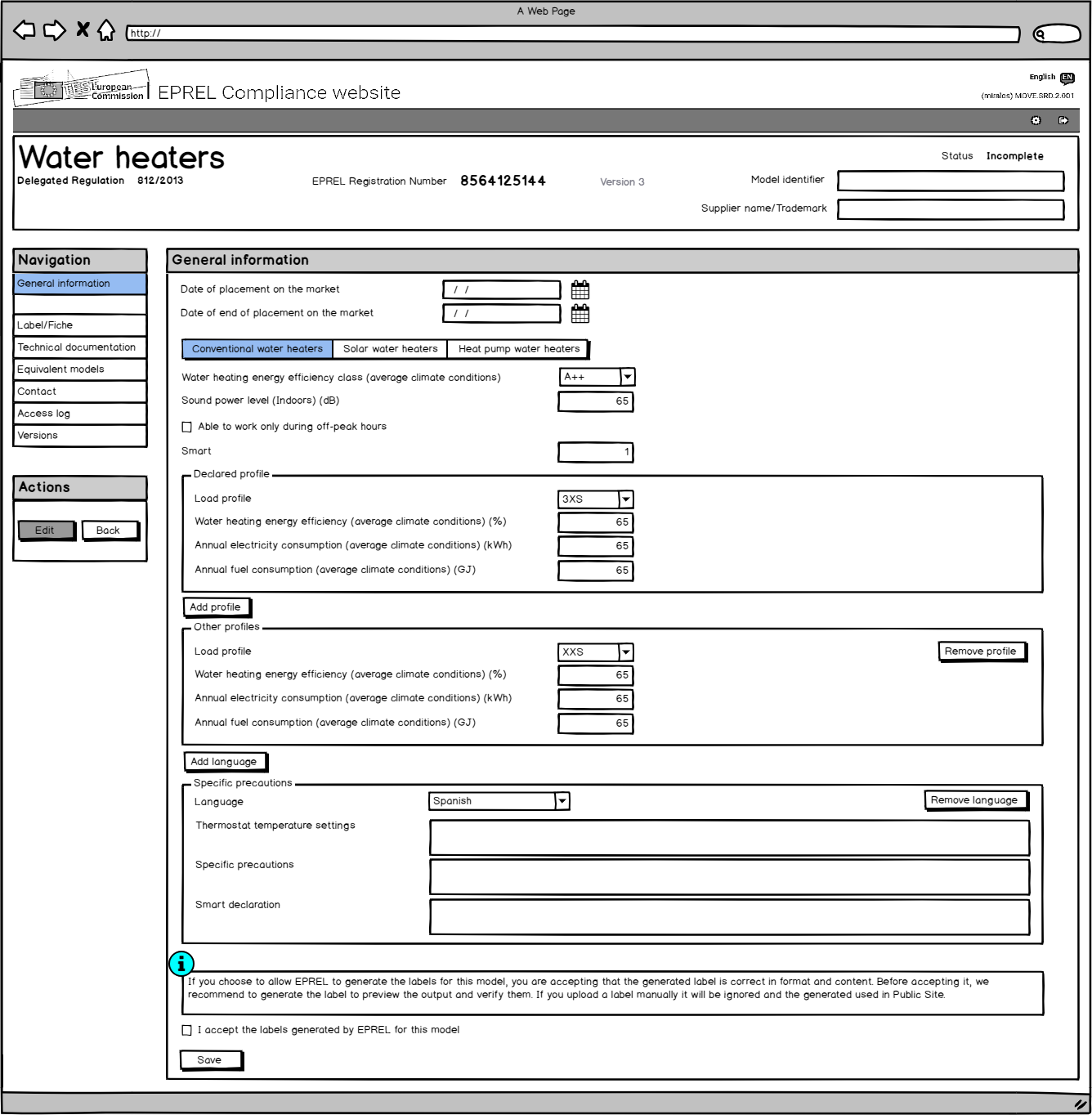


Figure 2 Water heaters – Conventional

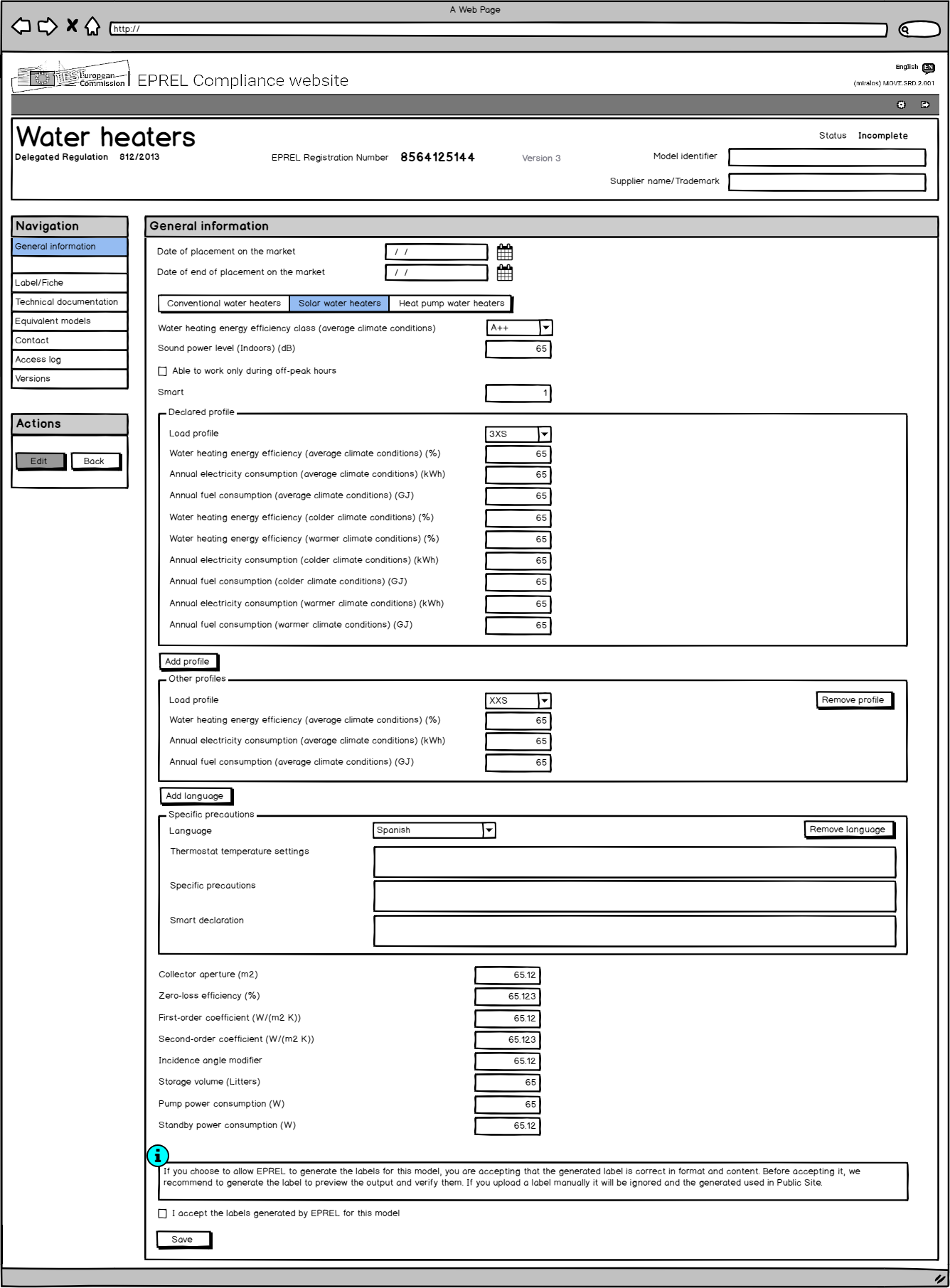


Figure 3 Water heaters - Solar

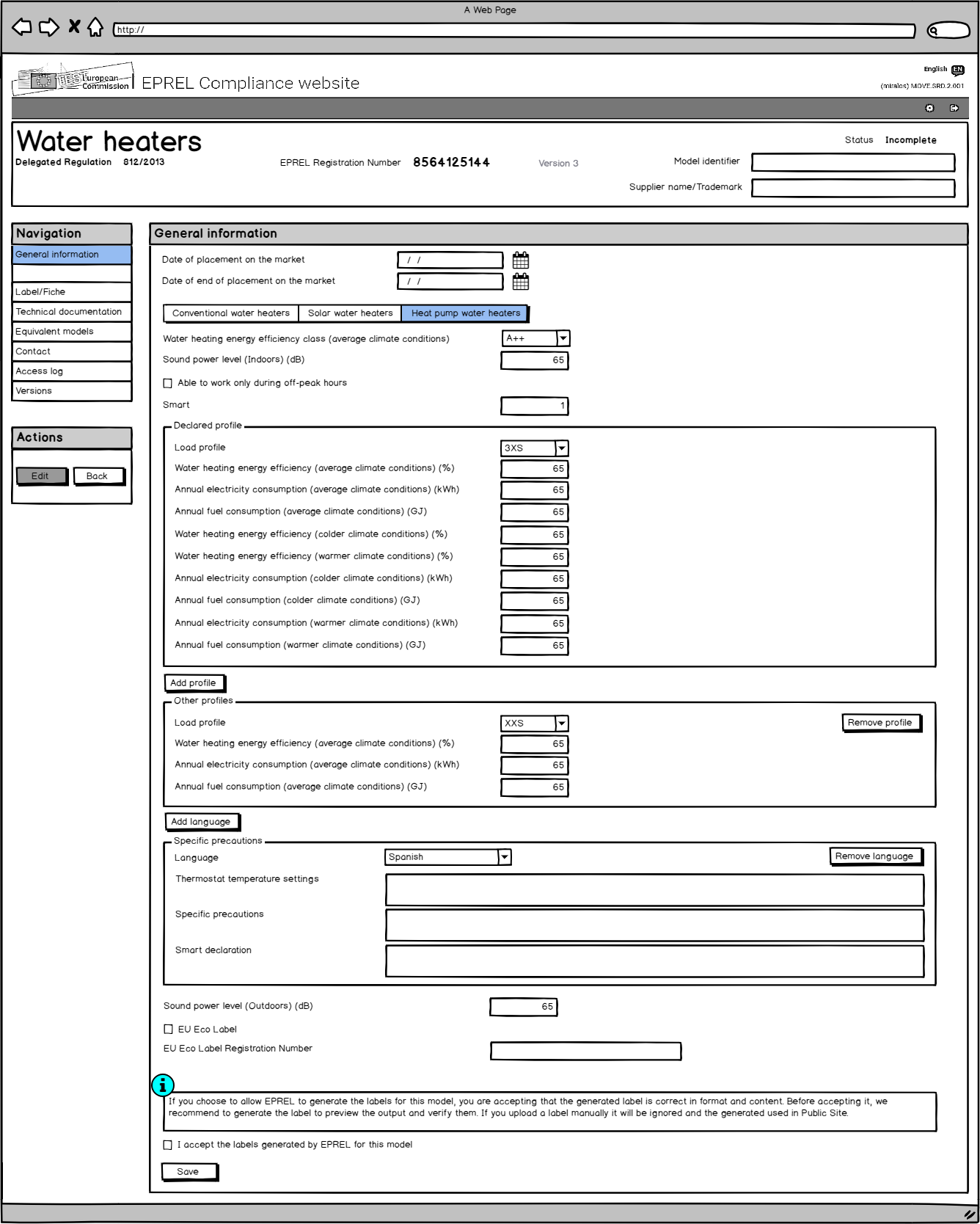


Figure 4 Water heaters - Heat pump

## 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**

|  |  |
| --- | --- |
| **1.1.1** | **1.1.2** |
| **1.1.3** |  |

**1.2 Label 2**

|  |  |
| --- | --- |
| **1.2.1** | **1.2.2** |
| **1.2.3** |  |

## 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 |
| ***(Repeat this section as many times as Other Load profiles)***  **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 |
| *(End other load profiles)* | |
| Thermostat temperature settings | *(In language selected or EN, if not exist, use the first language version added, and if nothing then leave empty)*  [Thermostat temperature settings] |
| Sound power level (Indoors) | [Sound power level (Indoors)] dB |
| *(Row to be shown only if [Able to work only during off-peak hours] = TRUE)*  This water heater is able to work only during off-peak hours. | |
| Specific precautions | *(In language selected or EN, if not exist, use the first language version added, and if nothing then leave empty)*  [Specific precautions] |
| *(Row to be shown only if [Smart] = 1)*  [Smart declaration] | |
| *(Section to be shown only for [Type]=”Heat pump water heaters”)*  **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 |
| *(Section to be shown only for [Type]=”Solar water heaters”)*  **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 |
| 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] m2 |
| Zero-loss efficiency | [Zero-loss efficiency] % |
| First-order coefficient | [First-order coefficient] W/(m2 x K) |
| Second-order coefficient | [Second-order coefficient] W/(m2 x K) |
| Incidence angle modifier | [Incidence angle modifier] |
| Storage volume | [Storage volume] Litters |
| Pump power consumption | [Pump power consumption] W |
| Standby power consumption | [Standby power consumption] W |