Factsheet

Kensa Heat Pumps
A KENSA GROUP COMPANY

FAQ's regarding ErP Directives

1) What is ErP?

ErP stands for 'Energy-related products" and from the 26th September 2015 under EU regulations heat pumps (as well as new boilers and water heaters) are required by law to have labels to show their energy performance as an individual product and when part of an overall heating system. Many of us will be familiar with this idea for fridges, cookers, televisions, etc.

2) How does it affect me the installer?

As an installer it means that from the 26th September 2015 any new product that is installed must have an energy label provided by the manufacturer, although any product that is in the supply chain, i.e. in a Distributor's warehouse, etc is exempt. It is the installer's responsibility to also produce a second 'package' label and product fiche which details the main components of the complete system and the effect that these have on the overall system efficiency.

3) What is a product fiche?

The product fiche is a document detailing the technical details of the units and the results of the required testing and hence the energy rating of the equipment. The product fiche will be available from the manufacturer of the product and information from this can be used to produce the 'package label' and a 'package' fiche i.e. a technical information sheet detailing the main components of the system and their associated affect on the overall efficiency.

4) What does it all mean to my client?

It means that your client can easily see how efficient the system is compared to other manufacturers in a clear, familiar and understandable way. It will enable them to make an informed judgement and select the best equipment to maximise the efficiency of his system.

5) What is a product label?

The product label is required by EU regulations to be provided with the product and grades the energy performance of the product from G to A++. The label is provided with the product by the manufacturer and is produced following product testing. As well as the energy performance it also provides other information such as noise and output over the three different climates within Europe.

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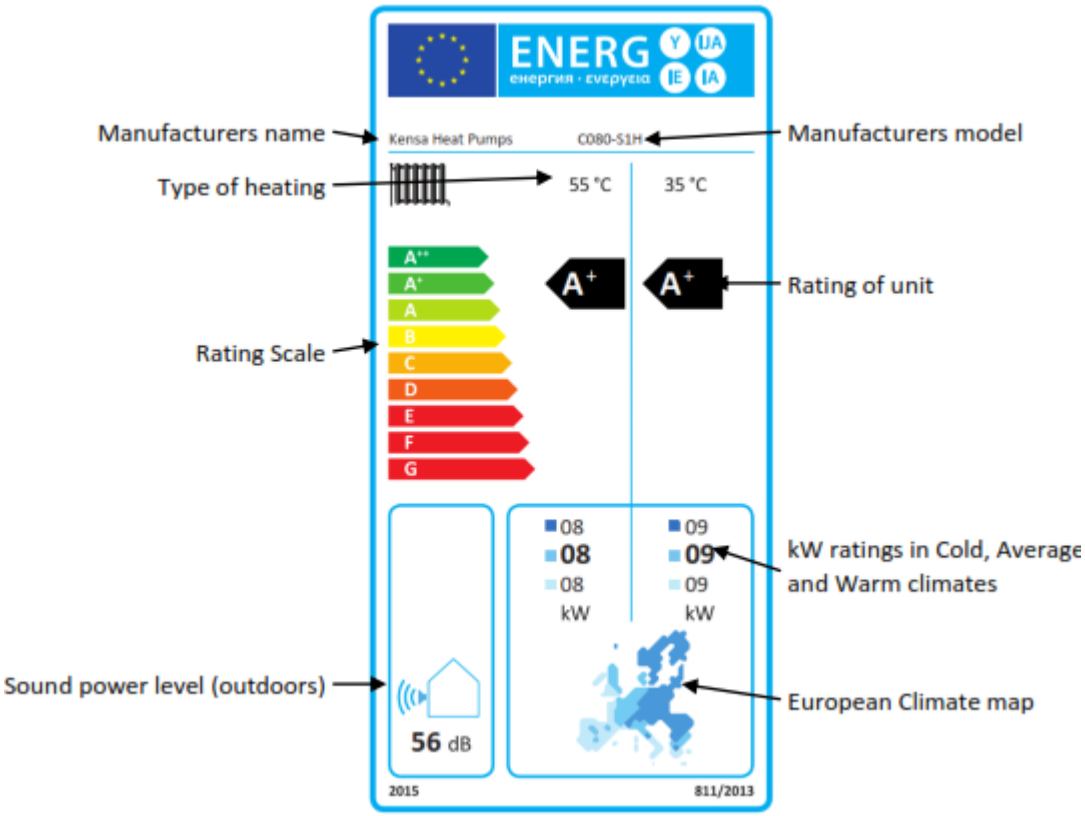

6) What is a package label?

The package label is produced by the installer and is required if the system comprises of a heater with temperature controls or solar or supplementary heating or a combination of these. It allows the client/ installer to select the most efficient products to incorporate into the system. The installer will take information from each of the product fiches supplied with the products and combine these to provide a package fiche detailing the overall efficiency of the system. The information from this product fiche can then be used to produce a package label. Kensa has various tools to help the installer with this package label and fiche and these can be downloaded from http://www.kensaheatpumps.com/installer-portal/business-support/erp-support/

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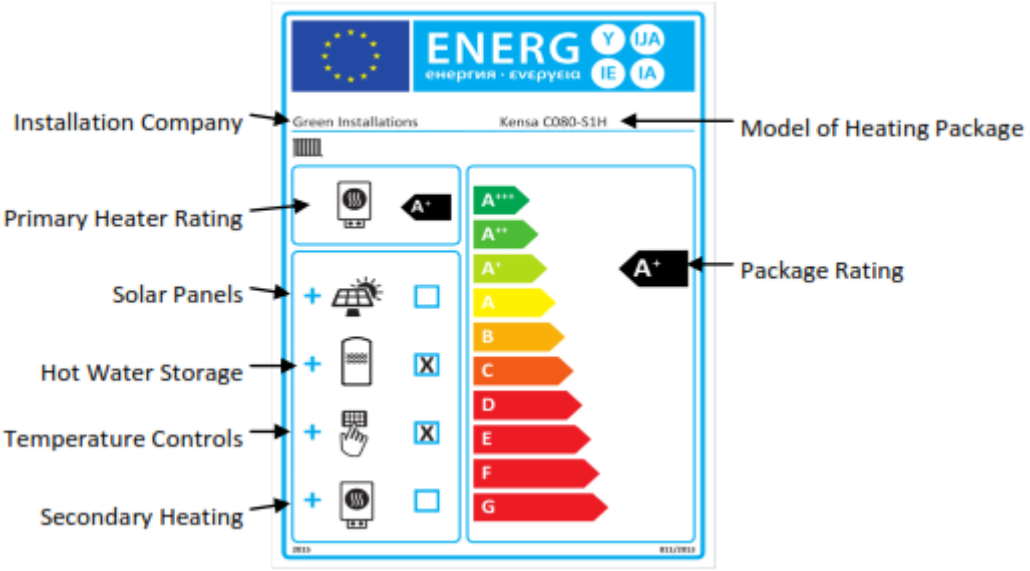

7) If I am reusing existing controls do I need a package label?

If the controls or any part of the system is not new and hence does not have a product fiche or product label then a package label is not required. A package label is only required if the whole system is being installed from new.

8) Who is responsible for producing the package label?

The installer is responsible for producing the package label using the information detailed within each products fiche. Kensa can help the installer complete this and although it seems onerous and complicated in reality all the data should be readily available and it is a matter of entering the data within a spreadsheet.

9) How does ErP affect MCS?

ErP and MCS are separate Standards, however MCS has taken the decision to adopt the performance figures outlined in the Ecodesign Directive as the minimum performance figures required for MCS Product approval. Obtaining product approval will now involve submitting test reports for one of the ErP test points in line with MCS requirements.
MCS also lays out guidelines for the calculation from the Heat Emitter guide of a Seasonal Performance Figure (SPF) of the installation. This enables the payments from the Renewable Heat Incentive to be calculated. From the 26th September 2015 to the 26th March 2016, MCS will allow either the System Seasonal Coefficient of Performance (SSCOP) which is derived from the ErP testing or the Heat Emitter Guide SPF to be used to calculate the RHI payments. Following the 26th March 2016 all RHI payments will be calculated using the SSCOP.

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10) If I am using a hot water cylinder with a heat pump do I need to produce a package label?

If the system is simply a hot water cylinder and heat pump a package label does not need to be provided, however Building Regulations do require a minimum heating control of a thermostat and on/ off controller. If these items are new and also installed at the same time a package label is required. If the controls are already existing or second hand then a package label is not required.

11) What do I give the client?

With regards to ErP, the client should be left with the following documents:-

- Individual Product labels (for all items that have been installed and require them).
- Individual Product Fiches (for all items that have been installed and require them).
- Package Label (where required)
- Package Fiche (where required)

12) Where do I show the label?

The actual product label only needs to be shown on the product where the product is physical on show, i.e. within a show room or at a exhibition. However the product seasonal heating energy efficiency class, i.e. A, A+ etc should be referenced within advertisements, price lists and technical promotional material. The Product fiche has to be provided and needs to be included in the product brochure or other literature provided with the product.

13) Does ErP affect my clients RHI payments?

ErP is quiet separate from MCS however MCS have decided to use a figure (the system seasonal coefficient of performance (SSCOP)), which is based on the ErP testing, to replace the SPF currently calculated using the Heat Emitter guide. The SSCOP can be obtained from the Microgeneration Certification website (www.microgenerationcertification.org) and is based on the flow temperature and SCOP calculated from the ErP testing. Manufacturers are required to provide their product ErP data to their Certification Bodies before 26th March 2016 to maintain their MCS approval. Using this data a temperature dependant SSCOP table will be produced and published online. It is this figure that installers will use so that OFGEM can calculate the client's RHI payments.

As some heat pumps will be sold prior to ErP data being required (prior to 26th September) and commissioned after this date, MCS/OFGEM will accept either a SSCOP based on the ErP data or a SPF figure based on the Heat Emitter Guide until the 26th March 2016. After this date only a SSCOP will be accepted.

Depending on the flow temperature in some cases the Heat Emitter Guide will provide a better payment value than using a SSCOP figure for your client, particular for ground source (which have a more stringent testing regime than air source).

14) What is Ecodesign?

The EU Ecodesign Directive establishes a framework under which manufacturers of energy-using products are obliged to reduce the energy consumption and other negative environmental impacts occurring throughout the product life cycle. It is complemented by the Energy Labelling Directive.
The Ecodesign Directive sets a framework for performance criteria which manufacturers must meet in order to legally bring their product to the market.
Performance criteria required by the Ecodesign Directive will gradually increase thereby continually improving the energy efficiency of products, for example the minimum efficiency level of a low temperature heat pump that can be sold within the EU as off the 26th September 2015 is 115%, as off the 26th September 2017 this will increase to 125% therefore Ecodesign continually drives product improvements.

15) How is the scheme monitored?

Monitoring and surveillance will be the responsibility of the National Measurement Office (NMO). Compliance with the regulations will be mandatory so it is important that installers understand their responsibilities. The NMO will conduct a market surveillance on the industry and will react to any anomalies that they find or have been reported to them. Every country within the EU will have a similar body to monitor the scheme and they can investigate any EU manufacturer and share their results with other bodies within the EU.

16) Does this only affect heat pumps?

No, this Directive covers all space heating and water heating devices such as oil boilers, gas boilers, heat pumps etc. up to 400kW, although product labels are not required on products over 70kW.
Biomass is not covered by the Directive, but will be subject to its own Directive in 2018.

17) What's the highest rating possible?

Currently for a product the highest energy class available is A++ and the lowest is G, however for packages it is A+++. As off the 26th September 2019, the energy classes for products are updated to A+++ for the highest and D for the lowest to reflect the improvement in efficiency driven by the Ecodesign Directive.

18) Why do GSHP have similar ratings or lower ratings than air source?

The same energy efficiency scale is used for ground source, water source and air source and at first glance it could mistaken to believe that a direct comparison of efficiency could be made between the different technologies, however it is important to remember that the actual tests carried out by the manufacturer to determine the seasonal space heating energy efficiency are at different conditions for

different technologies.

Technology	Air Source		Ground Source		Water Source	
	Source	Load	Source	Load	Source	Load
Temp range	-7 to 12C	24 to 55C	0C	24 to 55C	10C	24 to 55C

It can be seen that the source temperatures used in the air source tests vary from –7 to 12C (with the majority of the time greater than 0C) where as the ground and water source temperatures remain constant throughout the year and in fact in all climates including the Warmer climate. Within the UK MCS standards also dictate that the ground array for a ground source heat pump must be designed for a minimum temperature of the thermal transfer fluid entering the heat pump of 0C and that the average ground temperature is actual equal to the average ambient air temperature which ranges from 8.5 to 11.3C in the UK.

As efficiency can vary with inlet temperature it can be seen that the test conditions for ground source are very stringent and not really representative of the 'true' UK climate and conditions. This leads to a lower seasonal space heating energy efficiency than would be recorded in actual installations. This is backed up by in-field monitoring programs such as the project carried out by the Energy Saving Trust.

It is therefore reasonable to assume that the performance of a ground source heat pump or water source will actually be higher than that reported on the seasonal heating energy efficiency figure and certainly higher than the air source figures.