

Recognition and guidance to SAP assessors for the Luthmore ONE boiler in SAP10.2/SAP10.3 & RdSAP10

1. Purpose of this note

This Technical Note defines the method and provides guidance for representing the Luthmore ONE boiler within SAP 10.2/10.3 and RdSAP 10 assessments. It is not applicable to other versions of SAP and RdSAP.

It is intended to support consistent entry by SAP and RdSAP Domestic Energy Assessors where the product is installed as the main system providing both space heating and domestic hot water (DHW) within a dwelling.

2. Applicability

This guidance applies only to the Luthmore ONE boiler and must not be applied to other electric boiler, heat battery or electric storage heating products.

3. Product

Technology: Heat/Electric storage battery

Manufacturer: Luthmore Ltd.

Product: Luthmore ONE

Model: L01

Description: Battery-enabled electric combi boiler

Function: Main space heating and domestic hot water

Assessment route: SAP Appendix Q

4. Guidance to SAP assessors

The Luthmore ONE is a battery-enabled electric combi boiler providing both space heating and domestic hot water to a dwelling through a wet central heating system. Its operation combines direct electric heating with stored electrical energy, with the integrated battery charged during off-peak hours and discharged during peak hours.

There is no dedicated SAP category for this type of system. It shall therefore be represented using existing categories, with space heating modelled as a direct acting electric boiler and domestic hot water modelled as a separate electric dual immersion system with a defined hot water cylinder. The direct acting representation has been selected as the basis for recognition of the Luthmore ONE boiler in SAP.

4.1 SAP Assessor Instructions

The detailed steps a Domestic Energy Assessor (DEA) should follow are set out below.

4.1.1 Step-by-step implementation

1. Confirm that the installed system is the Luthmore ONE boiler, providing both space heating and domestic hot water.
2. Model the primary space heating system as a direct acting electric boiler, using the electricity tariff applicable to the dwelling being assessed.
3. Model the domestic hot water system as a separate electric immersion system (dual immersion heater), so that hot water is not derived from the main heating system.

4. Assign the following parameters to the hot water cylinder:
 - Cylinder volume: 138 litres
 - Declared cylinder heat loss: 0.791 kWh/day
5. Ensure that domestic hot water is derived from the defined immersion heater and cylinder parameters above, and not from the main space heating system.
6. Do not enter the system as any form of storage heater or storage combi boiler.

4.2 Summary of SAP inputs

Main heating: Direct acting electric boiler

Heating fuel: Electricity (tariff applicable to the dwelling)

Domestic hot water: Separate electric immersion (dual immersion heater)

Cylinder volume: 138 litres

Cylinder declared heat loss: 0.791 kWh/day