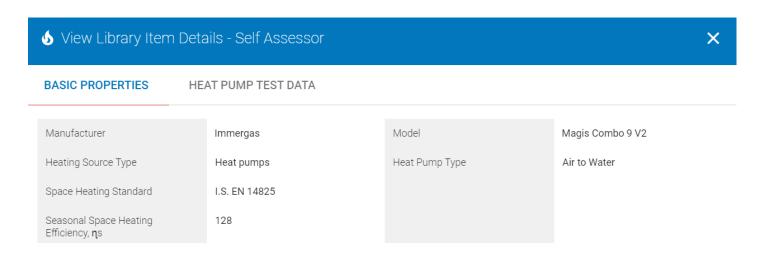
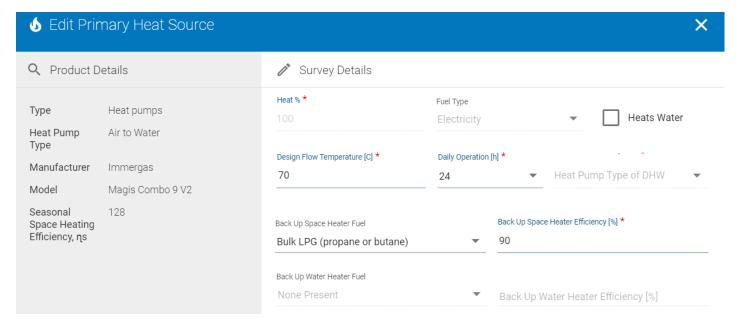
OIMMERGAS Magis Combo V2 (Combi) – DEAP4

1. Enter the Magis Combo V2 as a heat pump on the DEAP4 library.

The heat pump is tested to EN14825. Enter the data as you would with any other heat pump – including 35°C and 55°C data. Do not enter EN16147 data – water heating is via instantaneous combi gas boiler.



2. To add the primary heat source, choose the Magis Combo V2 from the library...



... and enter the following details:

Heats Water: No Heat Pump Type of DHW: N/A

Design flow temperature °C: Max 80°C Daily Operation: Max 24h NOTE: These must match designer/installer sheet

Choose the Back up Space Heater fuel and efficiency from the table below. No backup water heater present.

Model	Fuel	Efficiency			
4/6/9	LPG Bottled or Bulk	90.0%			
4/6/9	Natural Gas	89.0%			
12/14/16	LPG Bottled or Bulk	91.0%			
12/14/16	Natural Gas	89.8%			

3a. Enter water heating via the Magis Combo V2's instantaneous combi boiler as follows

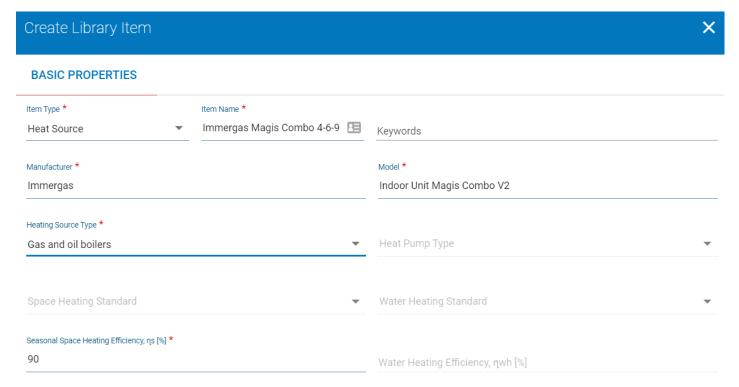
Distribution losses: Yes Storage Losses: No Is there a combi boiler: Yes

Primary Circuit Loss Type: Combi Boiler Combi Boiler Type: Instantaneous, without keep-hot facility

Electric Keep-hot facility: None Low water usage: No (unless criteria met)

Additional Loss [kWh/yr]: 600 (or as per Table 3a for low usage) Keep-hot consumption [kWh/yr]: 0

3b. Add Indoor Unit Magis Combo V2 to the library as a gas boiler



Use space heating efficiency from table below.

Model	Fuel	Efficiency				
4/6/9	LPG Bottled or Bulk	90.0%				
4/6/9	Natural Gas	89.0%				
12/14/16	LPG Bottled or Bulk	91.0%				
12/14/16	Natural Gas	89.8%				

3c. Add water heater source

Choose fuel type and Efficiency adjustment factor as normal.



Supporting documentation – Efficiency – DEAP

Net efficiency is taken from manufacturer's data and test reports.

The methodology from DEAP manual Appendix D is applied below to determine DEAP seasonal efficiency values for Natural Gas and LPG models.

Magis Combo V2 (Combi)

Model	4/6/9				12 / 14 / 16 / 12T / 14T / 16T			
Gas Type	Natural Gas		LPG		Natural Gas		LPG	
Condition	Full	Part	Full	Part	Full	Part	Full	Part
Net efficiency as per test reports	96.2%	106.1%	96.2%	106.1%	97.1%	107.2%*	97.1%	107.2%
Adjustment LPG as per D4	-		-	-2.2%	-		-	-2.2%
D2.2 conversion factor	0.901		0.921		0.901		0.921	
Gross Efficiency E	86.68%	95.60%	88.60%	95.69%	87.49%	96.41%	89.43%	96.71%
Has permanent pilot P? No = 0	0		0		0		0	
DEAP Function 104	on 104 0.5(Efull + Epart) – 2.1 – 4p							
Seasonal Efficiency 89.0%		90.0%		89.8%		91.0%		

^{*}Allowable net efficiency for calculation capped at max efficiency of 107%.