Thermal Performance Test Report

SMARTHTC

Build Test Solutions Ltd Unit A Building 8 The Old Depot, Bridge Street, Weedon Northampton NN7 4PS	Measured HTC **134** W/K	Measured HLP **1.6** W/m²K

Report Date	Unique Reference
03 July 2025	**45ADD33C-0C7F-4A12-96A5-D0B382D6E957**

Building Reference	Example House	**Number of Occupants**	3
Dwelling Type	House / Bungalow	**Floor Area**	85.0 m²
Attachment	Detached	**Party Wall Area**	-
Wall Type	Cavity / Timber-framed / Other	**Design HTC**	149 W/K

Main Heating Type	Gas	**Additional Heating**	No
Seasonal Efficiency	90.9%	**On-site Renewables**	No
Glazing Type	Double	**Windows Measured**	Yes
Frame Type	u-PVC	**Overshading**	-

Measured Result

Heat Transfer Coefficient (HTC)	**134 W/K**
Confidence Interval	[-19, +18] W/K
Heat Loss Parameter (HLP)	**1.6 W/m²K**
Heat Loss Rating	Good

The lower the number, the better the building is at retaining heat and the lower your energy bills will be.

Heat Transfer Coefficient

The HTC is a measure of whole building thermal performance. It is the sum of all heat loss through the envelope of the building (walls, floors, roofs, windows and doors) and is not influenced by factors such as occupancy, internal temperatures or weather conditions.

Heat Loss Parameter

The HLP is the HTC normalised by floor area and can be used to rate and compare different buildings.

Performance Gap

↓ **10** % Better than design HTC (149 W/K)

The design HTC was a predicted value entered prior to calculating the measured result and is usually obtained from a SAP assessment or EPC.

Heat Loss Rating Scale	(Lower value means less heat loss)	This HLP
0-1	Excellent	
1-2	Good	1.6
2-3	Average	
3+	Poor	

Calculation Details

Measurement From	01 January 2024 - 00:00
Measurement To	23 January 2024 - 15:00
Calculation Method	SmartHTC (Smart Meter Data)

Temperature Metrics

Mean Internal Temperature	20.0 °C
Mean External Temperature	3.6 °C
Mean Temperature Difference	16.5 °C

Energy Consumption (22 days 15 hours)

	Total (kWh)	Average per Day (kWh)
Electricity Import	204.8	9.05
Electricity Generation	-	-
Electricity Export	-	-
EV Charging	-	-
Heat Pump Total Output	-	-
Heat Pump Electricity Input	-	-
Net Electricity Consumption	204.8	9.05
Gas Consumption / Heating Oil	1,014.1	44.82

Heating System Sizing

Peak Heat Demand	**3.4 kWp**
Design Internal Temperature	20.0 °C
Design External Temperature (Winter)	-5.1 °C

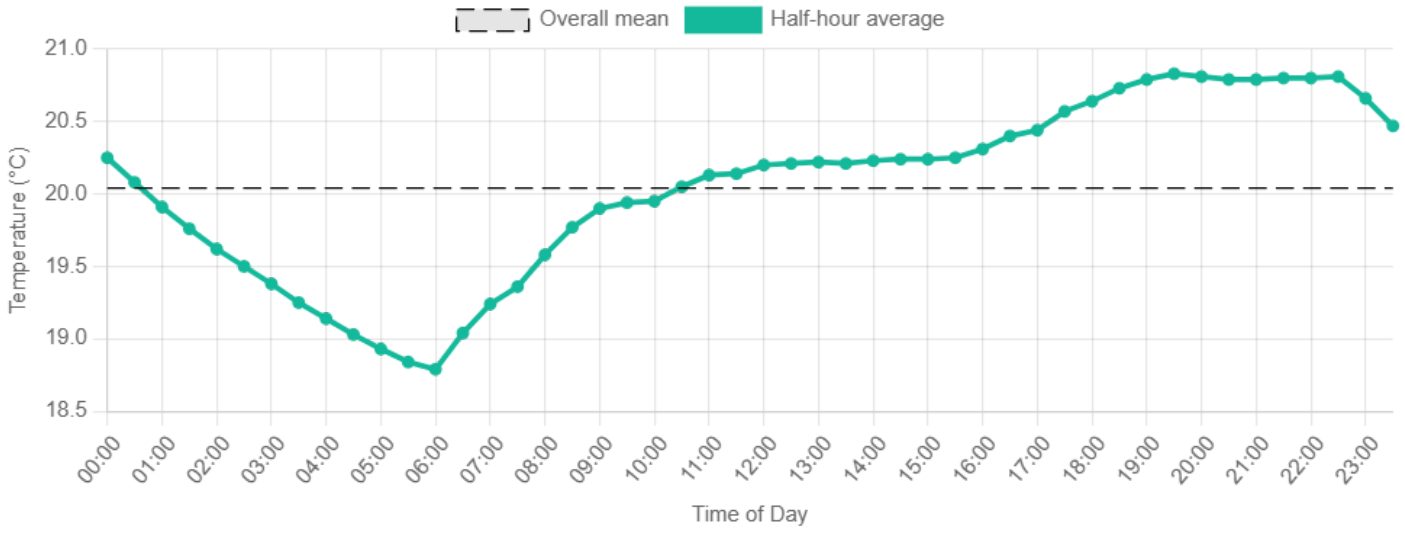
The peak heat demand determines what size heating system is required to maintain the specified design conditions. It can help specify the correct size boiler, heat pump or other heat generator that is needed to heat this property effectively at the coldest time of year.

Air Leakage

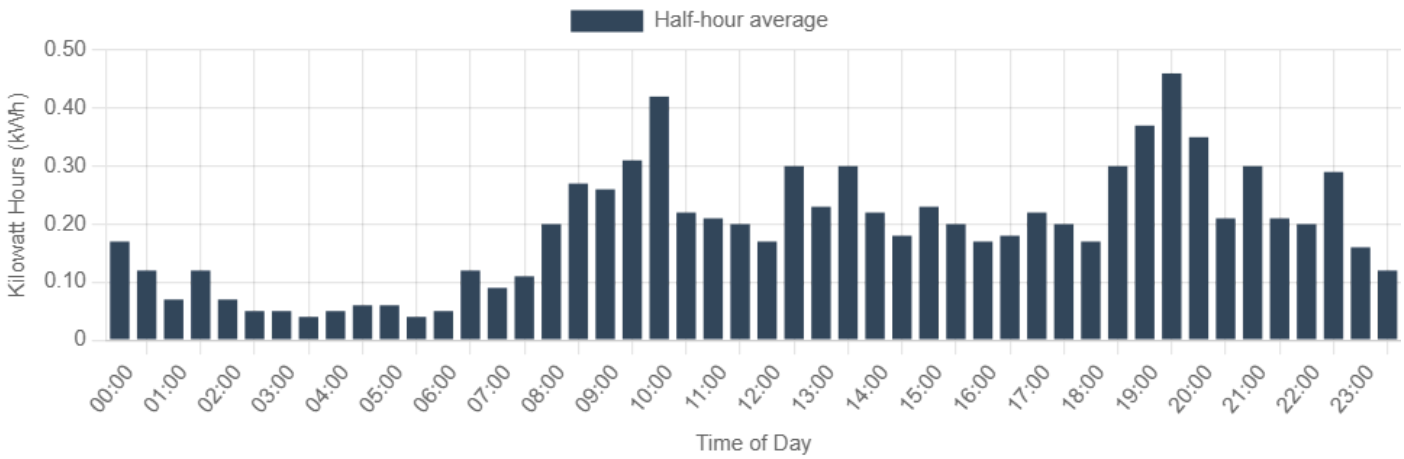
Infiltration Heat Loss	**9 W/K**
Percentage of Total HTC	7 %
Measured Air Permeability at 4 Pa	0.48 $m^3/h.m^2$

The infiltration heat loss is the proportion of the total heat loss that is attributable to unintended air leakage via holes, gaps and cracks in the building fabric (such as walls, floors, roofs, windows and doors).

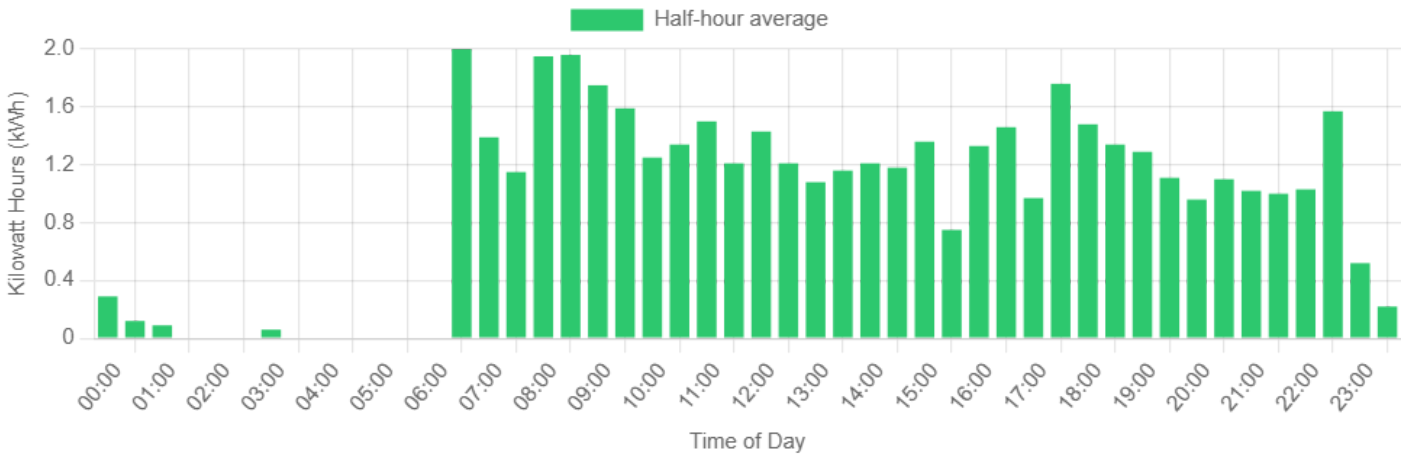
Internal Temperature Daily Profile



Electricity Consumption Daily Profile



Gas Consumption Daily Profile



Report Generated By

Name	Richard Jack
Job Title	-
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All times are displayed in: GMT Daylight Time (UTC+01:00)
SmartHTC calculator version: 4.0.1

The measurement result and underlying calculation was performed using proprietary SmartHTC technology from Build Test Solutions Ltd. All queries should be directed at the company that performed the test using their contact details displayed above.

BUILD TEST SOLUTIONS

For all other enquiries regarding SmartHTC, please visit www.buildtestsolutions.com.