



Group	Mass
Floor cassette	2 161 kg
Walls	3 198 kg
Roof	2 236 kg
Glazing + doors	341 kg
Kitchen	260 kg
Bathroom	125 kg
Stove	125 kg
Beds + seating	340 kg
Joinery	435 kg
Services	370 kg
Linen + kit	62 kg
Lifting	62 kg
Contingency 10%	981 kg
Total lift, module 1	10 793 kg

Areas	walls 47 m ² , roof 45 m ² , floor 37 m ² , glazing 10.6 m ² (34 % of the floor)
Heat loss	H _T 40 kW/K (incl. 0.05 for bridge) + H _V 3.3 kW/K = 43.9 kW/K = 30 K (20 ° - 10 °C) = 1.32 kW
Demand	1034 kWh/yr space heat, = 59 kWh/m ² yr; heat pump SCOP 3.5 = 524 kWh electricity
Supply	air-to-air heat pump 2.5 kW covers the peak; stove glass (turn-down 21 W) is fired in the evening and in shoulder seasons, intermittently, with a 120 kg stone heat store round it; the heat pump does the base load; 1.2 kWh/yr = 984 kWh/yr
Overheating	glazing g 0.5, roof overhangs/porches on the sunny glass, MVR summer bypass = night purge via tilt windows

1 site	set screw piles to ± 5 mm, services stubs to the module positions
2 lift	1 lift(s) with a 4-point spreader from the track; bolt skids, connect services in the crawl space
3 kit	decks, posts and roof run-ons/site roofs from a pre-cut kit; flues and stove after the roof is tight
4 check	air test ($n50 \leq 1.0$), flue inspection, smoke alarms, handover

Crane	80 t-m truck crane, outriggers 5.0 x 5.0
Radius	4.3 m to the CG
Chart	15.3 t $\geq$ 10.8 t (70 %)
CG	x 5 438 from F
Lugs	4 at 2 160 from the ends