

Residential Building Cooling Load Calculation Template

Building Information

Project Name		Location	
Floor Area (m ²)		Number of Occupants	

Envelope Loads

Element	Area (m ²)	U-Value (W/m ² ·K)	ΔT (°C)	Load (W)
Wall				
Roof				
Window				
Door				

Internal Loads

Source	Quantity	Load per Unit (W)	Total Load (W)
Occupants			
Lights			
Equipment			

Ventilation and Infiltration

Ventilation Airflow (L/s)		ΔT (°C)		Load (W)	
Infiltration Airflow (L/s)		ΔT (°C)		Load (W)	

Solar Gains

Window Area (m ²)		Solar Heat Gain Coefficient		Solar Irradiance (W/m ²)		Load (W)	
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Summary

Total Envelope Load (W)	
Total Internal Load (W)	
Total Ventilation/Infiltration Load (W)	
Total Solar Gain (W)	
Total Cooling Load (W)	