

Region:CalabriaArchetype code:Building category:Residential buildings – Apartments (in multifamily blocks)RES\_APPBLOCK\_<br/>1971-1980\_B\_CALPeriod of construction:1971-19801971-1980\_B\_CAL

Climatic zone: B Number of records: 6

Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014):

<u>External walls</u>: double layer of hollow bricks (12 cm + 25 cm) with uninsulated air gap (cod. MCV01). <u>Roof slabs</u>: no data available

Survey data (52%) Measured data (16%) Expert assumptions (13%) Others (19%) #

Data sources:

							Others (19%) #			
	Data	Symbol	Unit of	Mean	Standard	Q1 (first	Median	Q3 (third		
			measure	value	deviation	quartile)	value	quartile)		
BUILDING GEOMETRY	Number of floors	n <sub>f</sub>	-	1.17	0.41	1.00	1.00	1.00		
	Gross height	Hg	m	-	-	-	-	-		
	Footprint area	A <sub>footprint</sub>	m <sup>2</sup>	-	-	-	-	-		
	Heated gross floor area	A <sub>H;g</sub>	m <sup>2</sup>	-	-	-	-	-		
	Heated net floor area	A <sub>H;n</sub>	m <sup>2</sup>	-	-	-	-	-		
	Heated gross volume	V <sub>H;g</sub>	m³	-	-	-	-	-		
	Heated net volume	V <sub>H;n</sub>	m³	-	-	-	-	-		
	Compactness ratio	A <sub>env</sub> /V <sub>H;g</sub>	m <sup>-1</sup>	0.32	0.09	0.22	0.31	0.42		
9	WWR – North orientation	WWR <sub>N</sub>	-	0.15	0.11	0.05	0.11	0.27		
Ε	WWR – South orientation	<i>WWR</i> s	-	0.17	0.03	0.16	0.17	0.18		
	WWR – East orientation	WWR <sub>E</sub>	-	0.25	0.11	0.13	0.21	0.37		
	WWR – West orientation	WWR <sub>W</sub>	-	0.23	0.09	0.12	0.21	0.30		
	Window to useful floor area ratio	A <sub>wi</sub> /A <sub>use</sub>	-	0.16	0.03	0.14	0.15	0.20		
	Roof type				-					
	<i>U</i> -value of the roof	U <sub>fl;up</sub>	W/(m²·K)	0.89	0.60	0.34	0.69	1.61		
	External walls type	Hollow brick masonry: 100%								
핊	<i>U</i> -value of the wall	$U_{ m wl}$	W/(m²⋅K)	0.62	0.36	0.29	0.54	1.01		
Ō	Slab on ground floor type	-								
ENVELOPE	<i>U</i> -value of the floor	U <sub>fl;lw</sub>	W/(m <sup>2</sup> ·K)	0.83	0.52	0.35	0.67	1.44		
	Windows type	Single glazing, aluminum frame: 50%, Double glazing, aluminum frame, no thermal break: 17%, Double glazing, wooden frame: 17%, Single glazing, wooden frame: 16%								
	<i>U</i> -value of the windows	$U_{W}$	W/(m²⋅K)	3.53	1.07	2.80	2.88	4.90		
	Shading system type	Roller blinds: 100%								
GAINS and VENTILATION	Occupancy density	O <sub>C</sub>	person/m²	0.036	0.013	0.024	0.035	0.045		
	Lighting power density *	W <sub>L</sub>	W/m²	UNI EN 16798-1 - A.8.3						
NS (ILA)	Equipment power density *	W <sub>A</sub> W/m <sup>2</sup> UNI EN 16798-1 - A.8.3								
GAINS and ENTILATION	Type of ventilation	Natural: 100%								
S 2	Air exchange rate *	n	h <sup>-1</sup>	0.30	0.00	0.30	0.30	0.30		
	Heating system type		Autonomous: 83%, Centralized: 17%							
THERMAL SYSTEMS	Heating generator	Traditional Boiler: 67%, Condensing Boiler: 17%, Unknown: 16%								
	Daily operating time of the heating system *	t <sub>H</sub>	h	8.00	0.00	8.00	8.00	8.00		
	Energy carrier	Natural Gas: 83%, Unknown: 17%								
	Heating emission sub-system	Radiators: 83%, Unknown: 17%								
	Cooling system type	Absent: 100%								
	Daily operating time of the cooling system	t <sub>C</sub>	h	-	-	-	-	-		
	Cooling emission sub-system	-								
	DHW system type	Autonomous – coupled with heating: 100%								
	DHW generator	Natural gas boiler: 100%								
	# Standards (8%), Municipal database (7%), EPC database (4%).									
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards									



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The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.



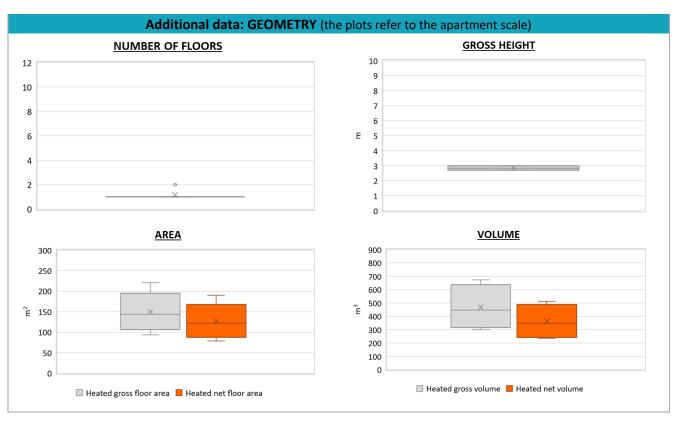
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ADDITIONAL DATA											
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)			
GEOMETRY: apartments	Inter-storey height	H <sub>n</sub>	m	2.85	0.16	2.70	2.85	3.00			
	Heated gross floor area	A <sub>H;g</sub>	m²	150.01	47.22	106.38	144.04	195.45			
	Heated net floor area	A <sub>H;n</sub>	m²	127.38	41.93	87.25	122.63	167.50			
	Heated gross volume	V <sub>H;g</sub>	m³	469.14	155.96	314.76	446.95	638.47			
	Heated net volume	$V_{H;n}$	m³	362.16	116.93	241.50	349.99	488.25			
THERMAL SYSTEMS	Heating efficiency or COP	η <sub>H;gen</sub> or <i>COP</i> H;gen	-	This value has to be retrieved from suitable datasheets							
	Total heating power *	P <sub>H;gen</sub>	kW	25.76	2.43	24.00	24.00	28.40			
	Cooling efficiency or EER	$\eta_{ extsf{C};gen}$ or $ extsf{\textit{EER}}_{ extsf{C};gen}$	-	This value has to be retrieved from suitable datasheets							
	Total cooling power	P <sub>C;gen</sub>	kW	-	-	-	-	-			
	Temperature of DHW	$\theta_{W}$	°C	40.00	0.00	40.00	40.00	40.00			
Ė	DHW system power	P <sub>W;gen</sub>	kW	-	-	-	-	-			
	* These values refer to the apartment scale										





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