

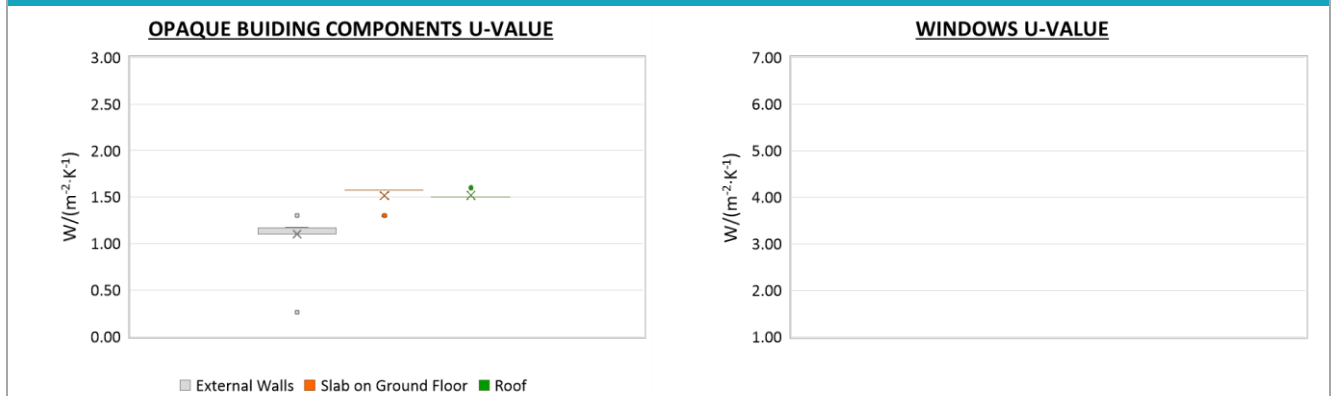
Region:	Tuscany						Archetype code: RES_APPBLOCK_ 1971-1980_D_TUS	
Building category:	Entire multi-family block							
Period of construction:	1971-1980							
Climatic zone:	D	Number of records:				43		
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: plaster (2 cm) - double layer of hollow bricks (8 cm + 12 cm) with air gap - plaster (2 cm) (cod. MCV01) Roof slabs: reinforced brick-concrete slab (20-22 cm) - uninsulated concrete screed (-)							Data sources: Visual inspection (39%) National database (15%) Standards (15%) Others (31%) #	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	n_f	-	3.43	0.97	3.00	3.00	4.00
	Gross height	H_g	m	11.36	3.24	9.45	10.20	13.50
	Footprint area	$A_{\text{footprint}}$	m ²	383.97	166.23	233.60	377.30	465.55
	Heated gross floor area	$A_{H,g}$	m ²	1252.92	608.83	733.80	1207.20	1734.00
	Heated net floor area	$A_{H,n}$	m ²	1108.15	538.48	649.01	1067.71	1533.64
	Heated gross volume	$V_{H,g}$	m ³	4138.25	2007.58	2454.50	4003.84	5731.05
	Heated net volume	$V_{H,n}$	m ³	3229.56	1571.89	1927.50	3203.12	4429.00
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.55	0.06	0.51	0.55	0.59
	WWR – North orientation	WWR_N	-	0.09	0.08	0.03	0.10	0.13
	WWR – South orientation	WWR_S	-	0.11	0.10	0.01	0.11	0.19
	WWR – East orientation	WWR_E	-	0.14	0.09	0.06	0.15	0.22
	WWR – West orientation	WWR_W	-	0.12	0.07	0.06	0.15	0.18
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.17	0.02	0.16	0.17	0.18
	ENVELOPE	Roof type	Reinforced brick-concrete slab: 100%.					
U-value of the roof		$U_{fi,up}$	W/(m ² ·K)	1.52	0.04	1.50	1.50	1.50
External walls type		Hollow brick masonry, low insulation: 96%; Hollow brick masonry: 2%; Hollow brick masonry, high insulation: 2%.						
U-value of the wall		U_{wl}	W/(m ² ·K)	1.10	0.14	1.10	1.10	1.17
Slab on ground floor type		Reinforced brick-concrete slab: 95%; Ventilated crawl space: 5%						
U-value of the floor		$U_{fi,lw}$	W/(m ² ·K)	1.52	0.11	1.58	1.58	1.58
Windows type		Unknown: 100%						
U-value of the windows		U_W	W/(m ² ·K)	-	-	-	-	-
Shading system type		Roller blinds: 100%.						
GAINS and VENTILATION	Occupancy density *	O_C	person/m ²	UNI EN 16798-1 - Table A.19				
	Lighting power density	W_L	W/m ²	UNI EN 16798-1 - A.8.3				
	Equipment power density *	W_A	W/m ²	UNI EN 16798-1 - A.8.3				
	Type of ventilation	Natural: 100%						
	Air exchange rate *	n	h ⁻¹	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Autonomous: 79%; Centralized: 21%.						
	Heating generator	Boiler (unknown type): 100%.						
	Daily operating time of the heating system *	t_H	h	12.00	0.00	12.00	12.00	12.00
	Energy carrier	Natural gas: 100%.						
	Heating emission sub-system	Unknown: 100%						
	Cooling system type	Unknown: 65%; Air-cooled chiller: 18%; Absent: 17%.						
	Daily operating time of the cooling system	t_C	h	12.00	0.00	12.00	12.00	12.00
	Cooling emission sub-system	Multisplit: 100%						
	DHW system type	Autonomous, coupled with heating: 79%; Autonomous, detached from heating: 21%.						
	DHW generator	Natural gas boiler: 88%; Electric boiler: 6%; Unknown: 6%.						
# Measured data (13%), Local database (8%), Other (6%), Standards (4%).								
* These values are derived from UNI EN ISO Standards								

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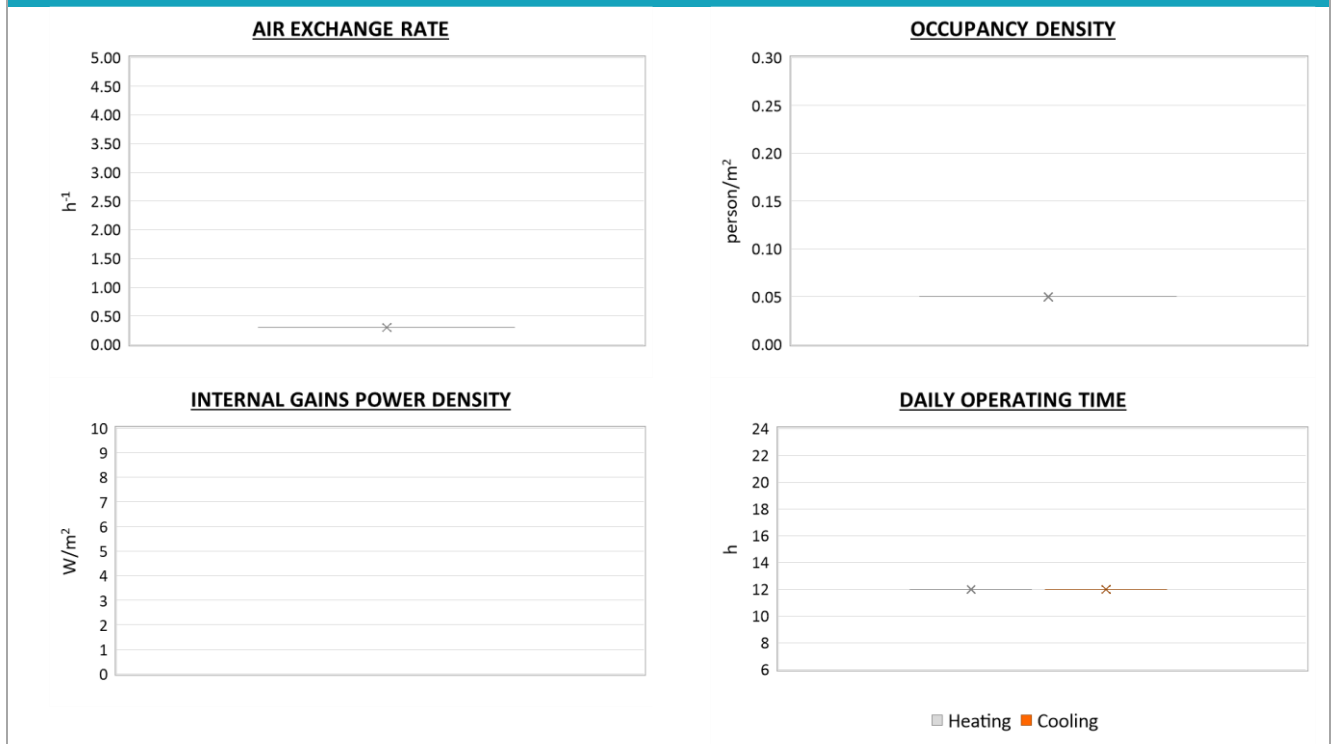
Numerical variables – GEOMETRY



Numerical variables – ENVELOPE



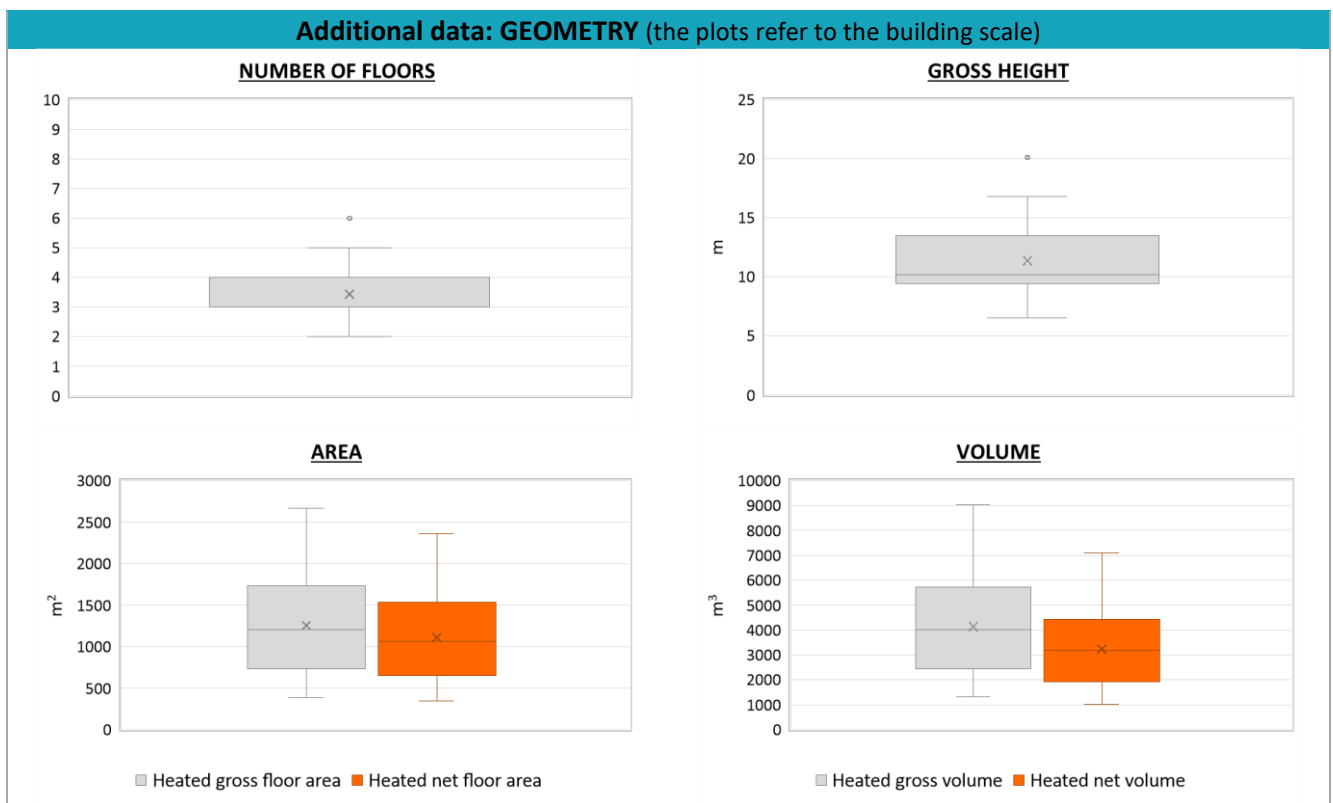
Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE



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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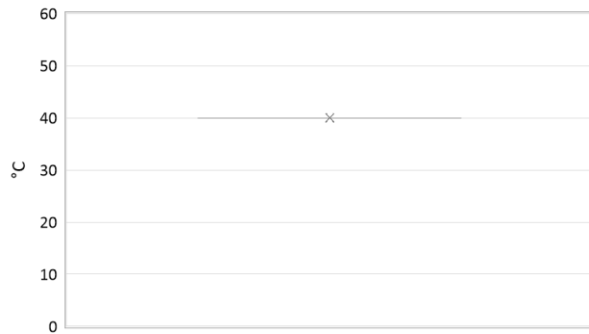
ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	H_n	m	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	-	-	-	-	-
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m ³	-	-	-	-	-
THERMAL SYSTEMS	Heating efficiency or <i>COP</i>	$\eta_{H,gen}$ or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power *	$P_{H,gen}$	kW	-	-	-	-	-
	Cooling efficiency or <i>EER</i>	$\eta_{C,gen}$ or $EER_{C,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power *	$P_{C,gen}$	kW	-	-	-	-	-
	Temperature of DHW	θ_w	°C	40.00	0.00	40.00	40.00	40.00
	DHW system power *	$P_{W,gen}$	kW	-	-	-	-	-
* These values refer to the apartment scale								



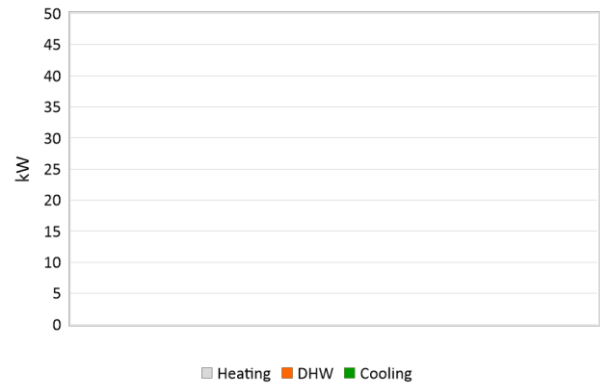
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Additional data: other numerical variables that are not included in the archetype

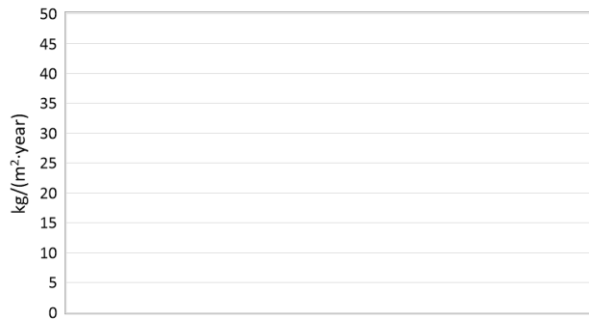
DHW SUPPLY TEMPERATURE



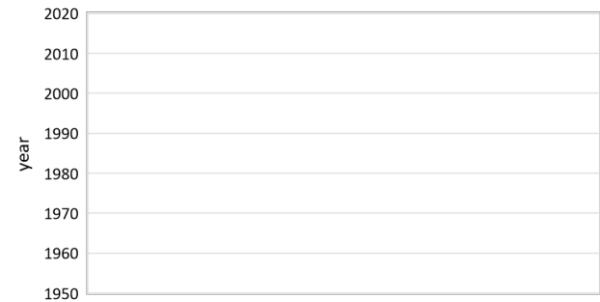
SYSTEM POWER



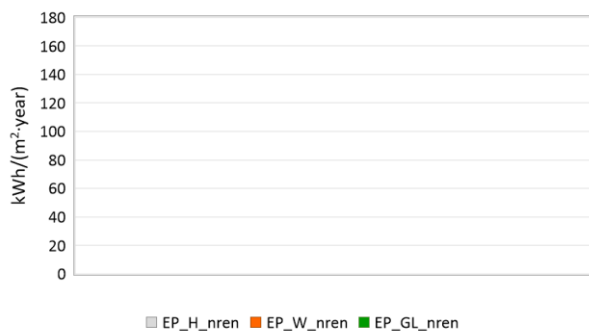
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

