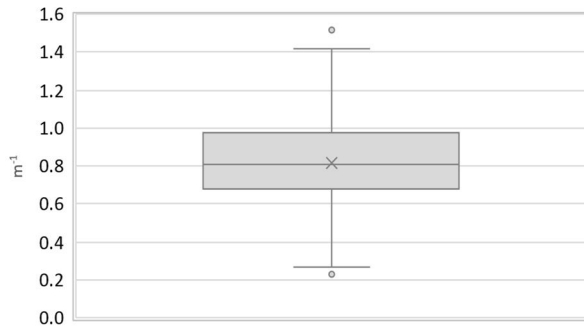


Region:		Liguria					Archetype code: RES_BLDGS_ -1950_E_LIG	
Building category:		Residential buildings – Entire multifamily blocks						
Period of construction:		-1950						
Climatic zone:		E	Number of records:		412			
Description: <u>External walls</u> : no data available <u>Roof slabs</u> : no data available							Data sources: EPC databases (100%)	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Q2 (Median value)	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	n_f	-	-	-	-	-	-
	Gross height	H_g	m	-	-	-	-	-
	Footprint area	$A_{\text{footprint}}$	m ²	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	96.9	62.0	59.1	83.0	109.5
	Heated gross volume	$V_{H,g}$	m ³	409.8	264.9	249.2	341.6	473.2
	Heated net volume	$V_{H,n}$	m ³	271.9	191.7	158.0	221.3	316.8
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.82	0.23	0.68	0.81	0.98
	WWR – North orientation	WWR_N	-	-	-	-	-	-
	WWR – South orientation	WWR_S	-	-	-	-	-	-
	WWR – East orientation	WWR_E	-	-	-	-	-	-
	WWR – West orientation	WWR_W	-	-	-	-	-	-
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.10	0.02	0.09	0.09	0.10
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{\text{fl;up}}$	W/(m ² ·K)	1.49	0.90	0.62	1.65	2.07
	External walls type	-						
	U-value of the wall	U_{wl}	W/(m ² ·K)	1.69	0.63	1.27	1.62	2.24
	Slab on ground floor type	-						
	U-value of the floor	$U_{\text{fl;lw}}$	W/(m ² ·K)	1.66	0.75	1.41	1.63	2.01
	Windows type	-						
	U-value of the windows	U_W	W/(m ² ·K)	4.07	1.31	3.10	4.24	5.18
Shading system type	-							
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	-						
	Heating generator	Unknown: 55%; Traditional boiler: 25%; Fireplace: 12%; Condensing boiler: 7%; Air-source heat pump 1%						
	Daily operating time of the heating system *	t_H	h	14	0	14	14	14
	Energy carrier	Unknown: 55%; Natural gas: 15%; Electricity and solid biomass: 12%; Electricity and natural gas: 8%; Solid biomass: 4%; LPG: 3%; Electricity and gas oil: 1%; Electricity: 1%; Gas Oil: 1%						
	Heating emission sub-system	Unknown: 53%; Radiators: 39%; Air Ducts: 4%; Radiant panels: 2%; Air Heater: 2%						
	Cooling system type	-						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	-						
	DHW generator	Unknown: 68%; Electric boiler: 17%; Condensing boiler: 6%; Natural gas boiler: 6%; Electric heat pump: 3%						
* These values were not available in the considered sources, and are thus derived from UNI EN Standards								

Region:	Liguria	Archetype code: RES_BLDGS_ -1950_E_LIG
Building category:	Residential buildings – Entire multifamily blocks	
Period of construction:	-1950	
Climatic zone:	E	
Number of records:		412

Numerical variables – GEOMETRY

COMPACTNESS RATIO

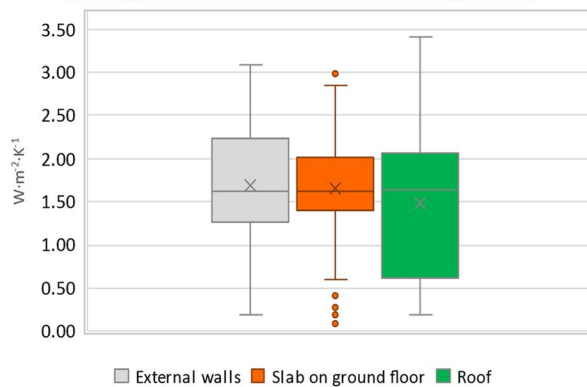


WINDOWS TO WALL RATIO

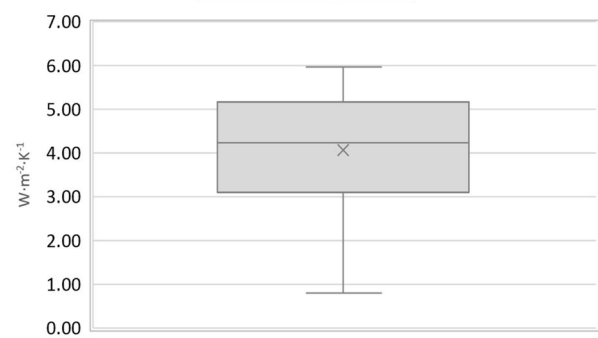


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE



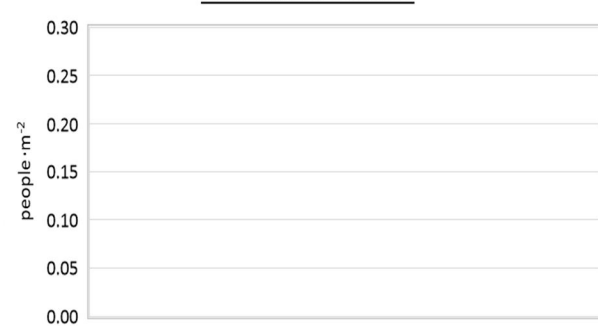
External walls Slab on ground floor Roof

Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

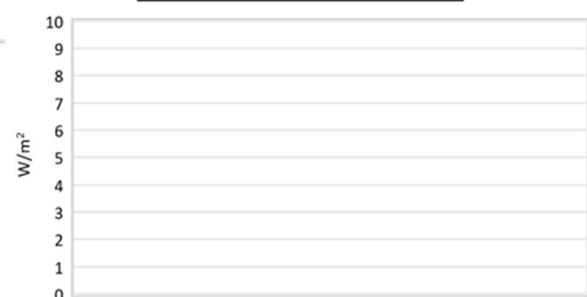
AIR EXCHANGE RATE



OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME



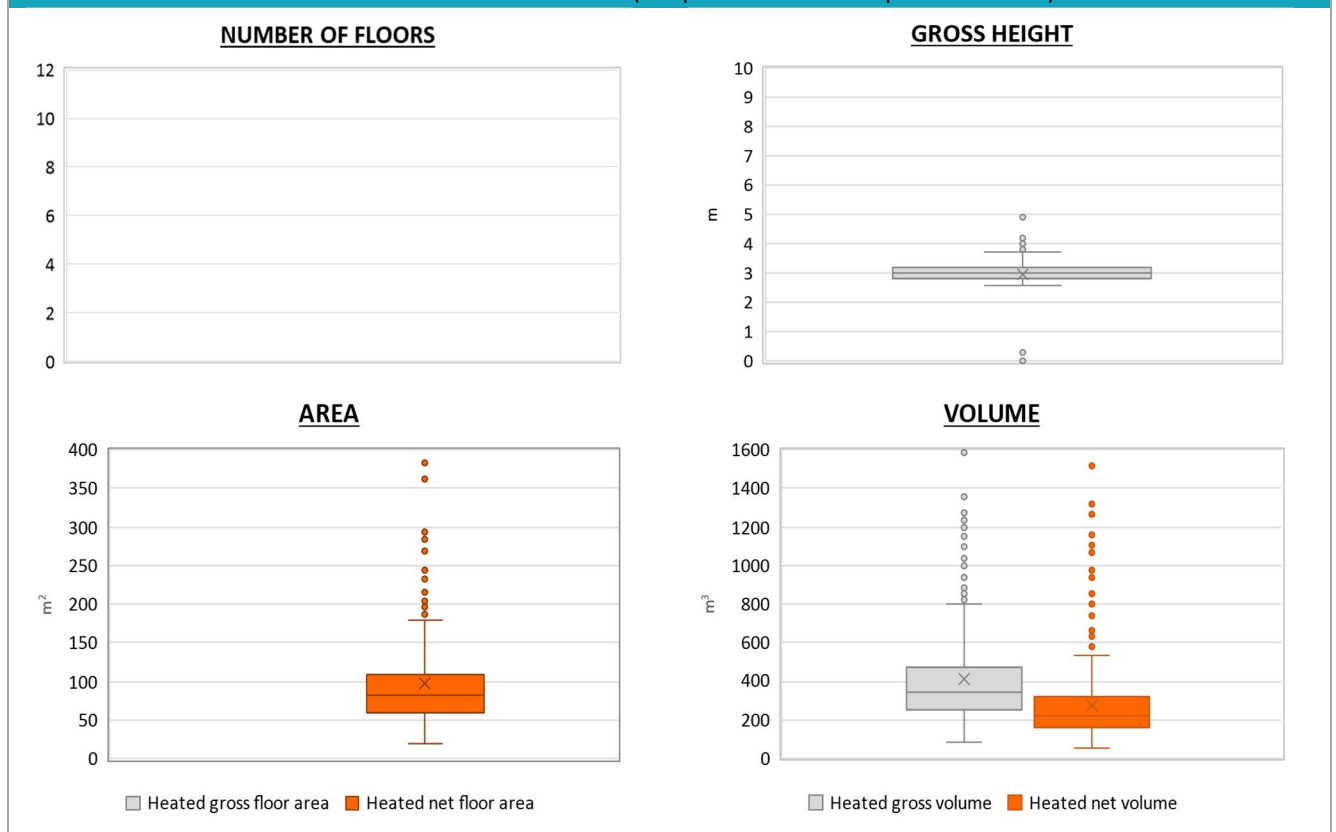
Heating Cooling



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.

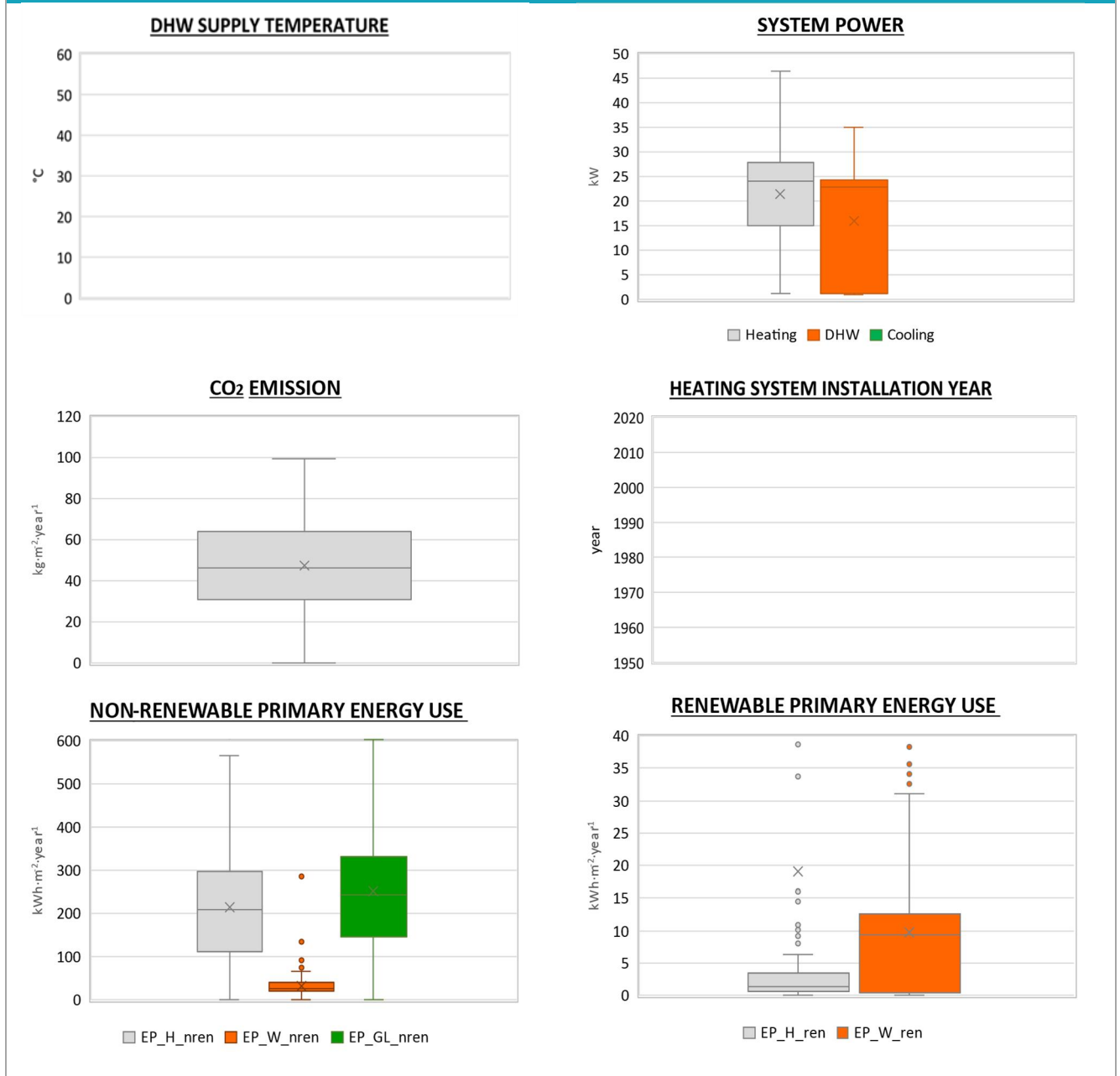
Region:		Liguria				Archetype code: RES_ BLDGS_ -1950_E_LIG		
Building category:		Residential buildings – Entire multifamily blocks						
Period of construction:		-1950						
Climatic zone:		E	Number of records:		412			
ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	H_n	m	3.1	0.3	2.8	3.0	3.2
	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	21.6	8.7	15.0	24.0	27.9
	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	-	-	-	-	-
	DHW system power *	$P_{W,gen}$	kW	16.0	11.8	1.2	23.0	24.4
	* These values refer to the apartment scale							

Additional data: GEOMETRY (the plots refer to the apartment scale)



Region:	Liguria	Archetype code: RES_BLDGS_ -1950_E_LIG
Building category:	Residential buildings – Entire multifamily blocks	
Period of construction:	-1950	
Climatic zone:	E	
Number of records:		412

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



NOTE: Sample size of the analysed data.

Compactness ratio: 400; Window to useful floor area ratio: 24; U-value of the roof: 144; U-value of the wall: 379; U-value of the floor: 64; U-value of the windows: 412; Inter-storey height: 403; Heated net floor area: 403; Heated gross volume: 400; Heated net volume: 400; Total heating power: 155; DHW system power: 222; CO₂ Emission: 366; EP_H_nren: 408; EP_W_nren: 389; EP_GL_nren: 409; EP_H_ren: 192; EP_W_ren: 252