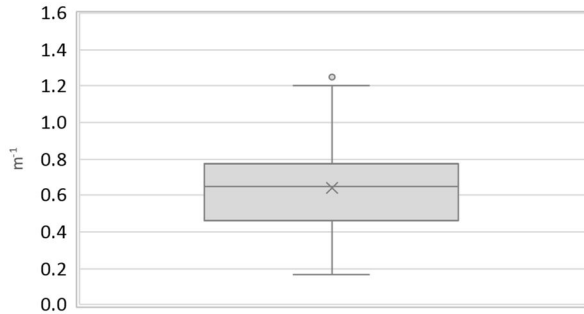


Region:	Liguria					Archetype code: RES_APPBLOCK_ 2001-_E_LIG		
Building category:	Residential buildings – Apartments in multi-family block							
Period of construction:	2001-							
Climatic zone:	E	Number of records:		247				
Description: <u>External walls</u> : no data available <u>Roof slabs</u> : 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	-	-	-	-	-
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m ³	-	-	-	-	-
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.64	0.23	0.46	0.65	0.77
	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	$A_{\text{wl}}/A_{\text{use}}$	-	0.10	0.02	0.08	0.10	0.11
	ENVELOPE	Roof type	-					
U-value of the roof		$U_{\text{fl;up}}$	W/(m ² ·K)	0.84	0.68	0.29	0.57	1.65
External walls type		-						
U-value of the wall		U_{wl}	W/(m ² ·K)	0.73	0.57	0.31	0.47	1.10
Slab on ground floor type		-						
U-value of the floor		$U_{\text{fl;lw}}$	W/(m ² ·K)	0.90	0.59	0.42	0.61	1.55
Windows type		-						
U-value of the windows		U_W	W/(m ² ·K)	2.92	1.20	2.00	2.86	3.55
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: 96%; Mechanical: 4%						
	Air exchange rate *	n	h ⁻¹	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Unknown: 96%; Autonomous: 4%						
	Heating generator	Unknown 46%; Traditional boiler: 24%; Condensing boiler: 21%; Fireplace: 4%; Air-source heat pump: 3%; Electric heating: 2%						
	Daily operating time of the heating system *	t_H	h	14	0	14	14	14
	Energy carrier	Unknown: 45%; Natural gas: 26%; Electricity and natural gas: 14%; Electricity: 5%; LPG: 4%; Electricity and solid biomass: 3%; Solid biomass: 3%						
	Heating emission sub-system	Unknown: 45%; Radiators: 36%; Radiant panels: 15%; Fan-coil: 2%; Air Ducts: 1%; Air Heater: 1%						
	Cooling system type	Unknown: 95%; Heat pump air-air: 4%; Heat pump air-water: 1%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	-						
	DHW generator	Unknown: 61%; Condensing boiler: 26%; Electric boiler: 6%; Solar thermal: 5%; Natural gas boiler: 1%; Electric heat pump: 1%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

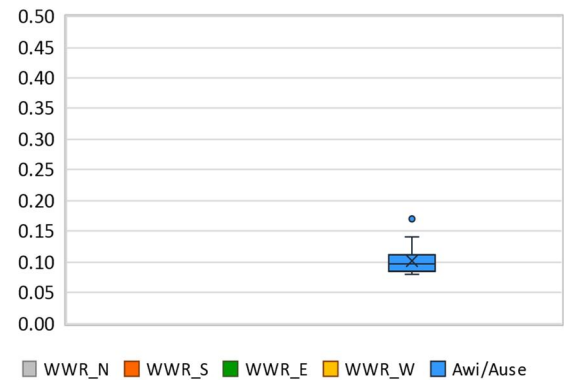
Region:	Liguria	Archetype code: RES_APPBLOCK_ 2001-_E_LIG
Building category:	Residential buildings – Apartments in multi-family block	
Period of construction:	2001-	
Climatic zone:	E	
Number of records:		247

Numerical variables – GEOMETRY

COMPACTNESS RATIO

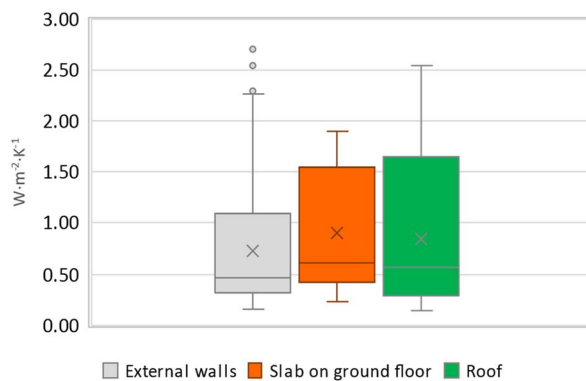


WINDOWS TO WALL RATIO

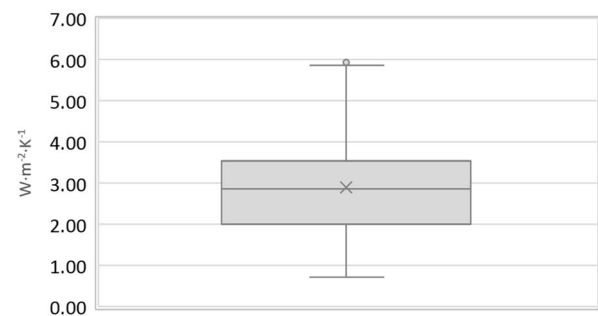


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

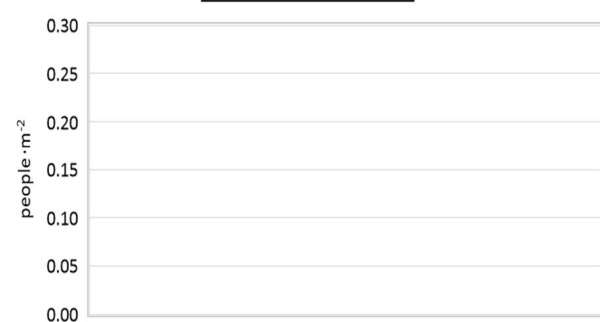


Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

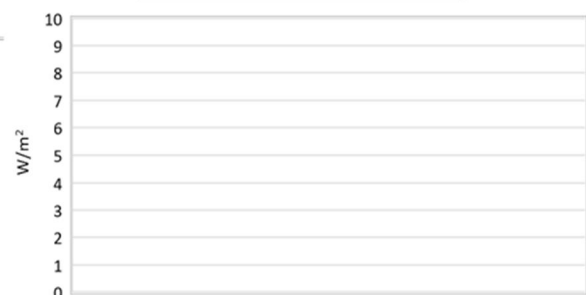
AIR EXCHANGE RATE



OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME



Region:	Liguria	Archetype code: RES_APPBLOCK_ 2001-_E_LIG
Building category:	Residential buildings – Apartments in multi-family block	
Period of construction:	2001-	
Climatic zone:	E	
Number of records:		247

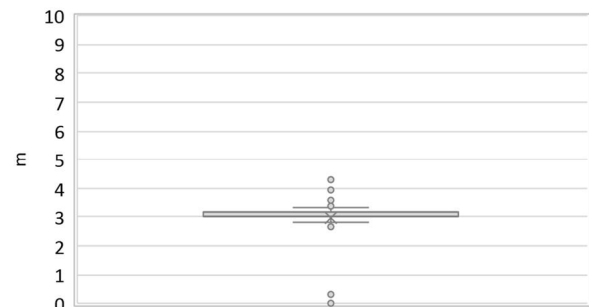
ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	H_n	m	3.1	0.3	3.0	3.0	3.2
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	96.1	66.1	55.6	75.8	101.3
	Heated gross volume	$V_{H,g}$	m ³	371.1	284.1	211.0	283.5	392.5
	Heated net volume	$V_{H,n}$	m ³	274.7	224.5	150.0	205.3	274.7
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	25.0	9.8	23.7	24.0	25.8
	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	20.5	9.1	23.0	24.0	24.0
* These values refer to the apartment scale								

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

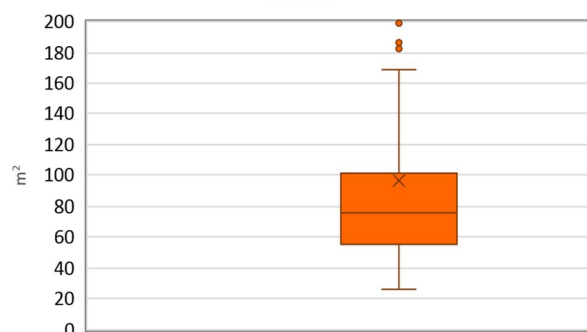
NUMBER OF FLOORS



GROSS HEIGHT

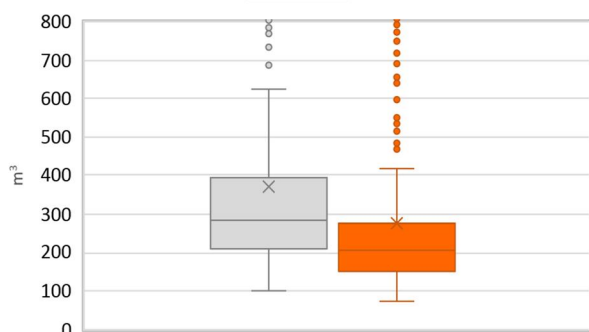


AREA



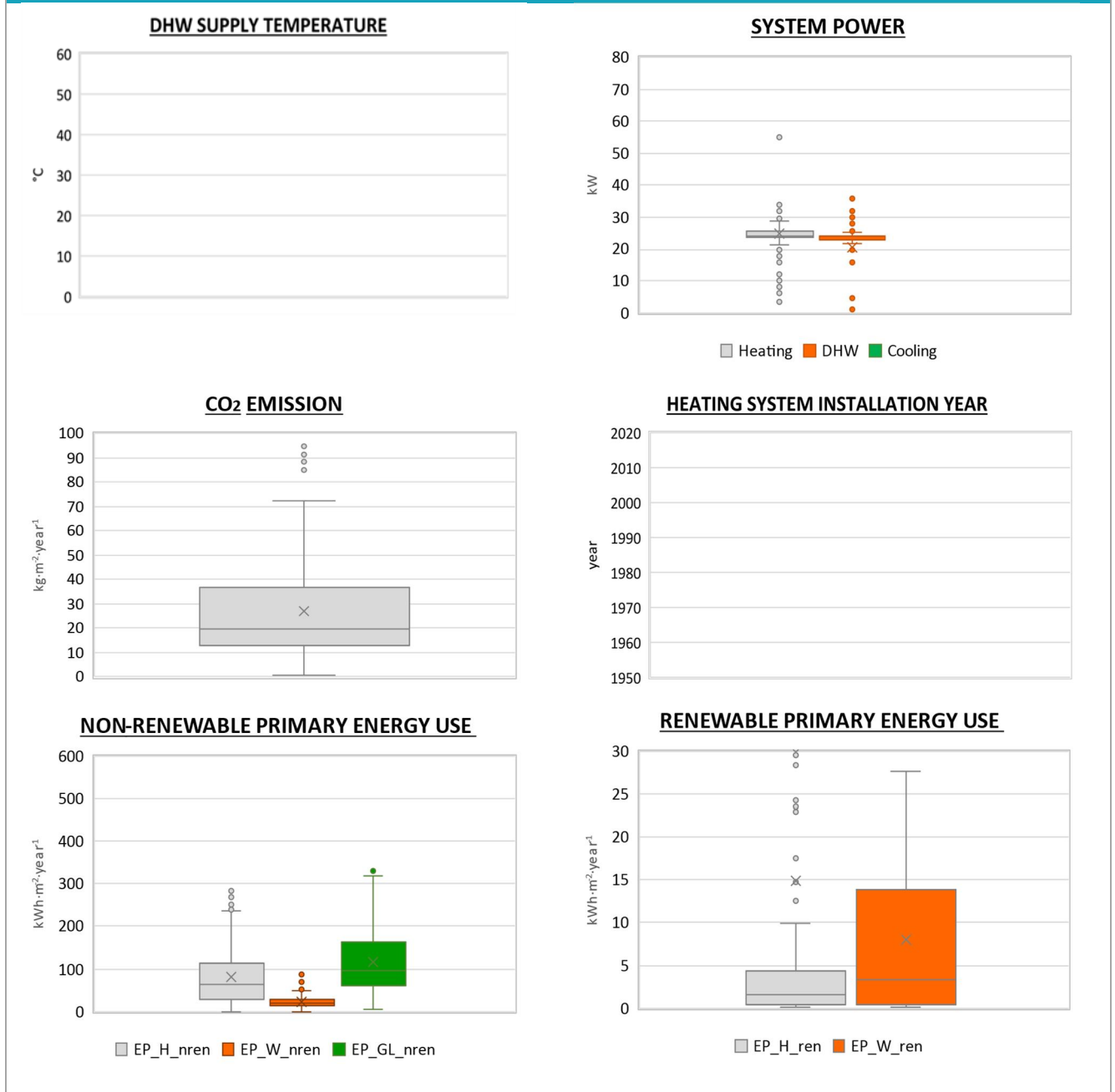
Heated gross floor area Heated net floor area

VOLUME



Heated gross volume Heated net volume

Region:	Liguria	Archetype code: RES_APPBLOCK_ 2001-_E_LIG
Building category:	Residential buildings – Apartments in multi-family block	
Period of construction:	2001-	
Climatic zone:	E	
Number of records:		247

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


NOTE: Sample size of the analysed data.

Compactness ratio: 235; Window to useful floor area ratio: 23; U-value of the roof: 71; U-value of the wall: 232; U-value of the floor: 22; U-value of the windows: 247; Inter-storey height: 241; Heated net floor area: 241; Heated gross volume: 235; Heated net volume: 235; Total heating power: 106; DHW system power: 130; CO₂ Emission: 245; EP_H_nren: 241; EP_W_nren: 221; EP_GL_nren: 241; EP_H_ren: 183; EP_W_ren: 145