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:

External walls: no data available
Roof slabs: no data available

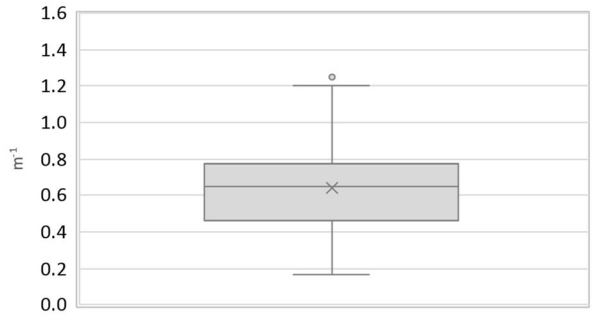
Data sources:
EPC databases (100%)

	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	$A_{footprint}$	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	$A_{env}/V_{H;g}$	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_{wi}/A_{use}	-	0.10	0.02	0.08	0.10	0.11
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fl;up}$	$W/(m^2 \cdot K)$	0.84	0.68	0.29	0.57	1.65
	External walls type	-						
	U-value of the wall	U_{wl}	$W/(m^2 \cdot K)$	0.73	0.57	0.31	0.47	1.10
	Slab on ground floor type	-						
	U-value of the floor	$U_{fl;lw}$	$W/(m^2 \cdot K)$	0.90	0.59	0.42	0.61	1.55
	Windows type	-						
	U-value of the windows	U_W	$W/(m^2 \cdot K)$	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:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 2001-_E_LIG
Period of construction:	2001-			
Climatic zone:	E	**Number of records:**	247	

Numerical variables – GEOMETRY

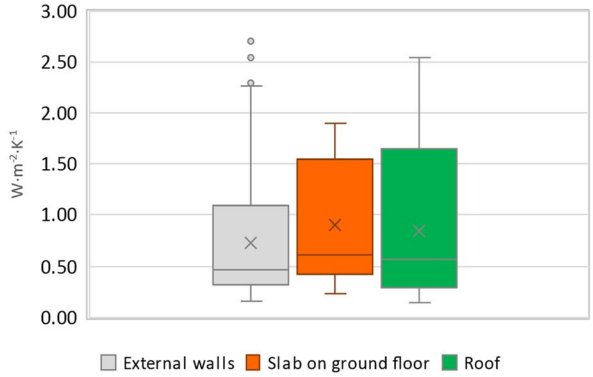
COMPACTNESS RATIO



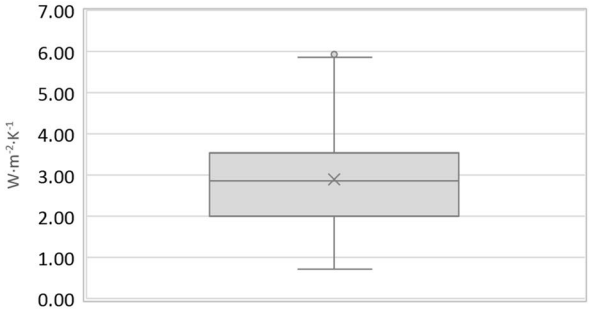
WINDOWS TO WALL RATIO

Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE



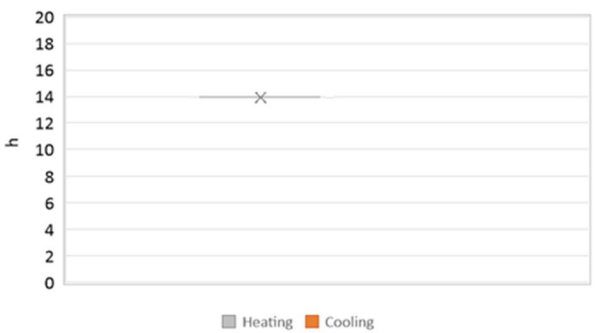
Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

AIR EXCHANGE RATE

OCCUPANCY DENSITY

INTERNAL GAINS POWER DENSITY

DAILY OPERATING TIME

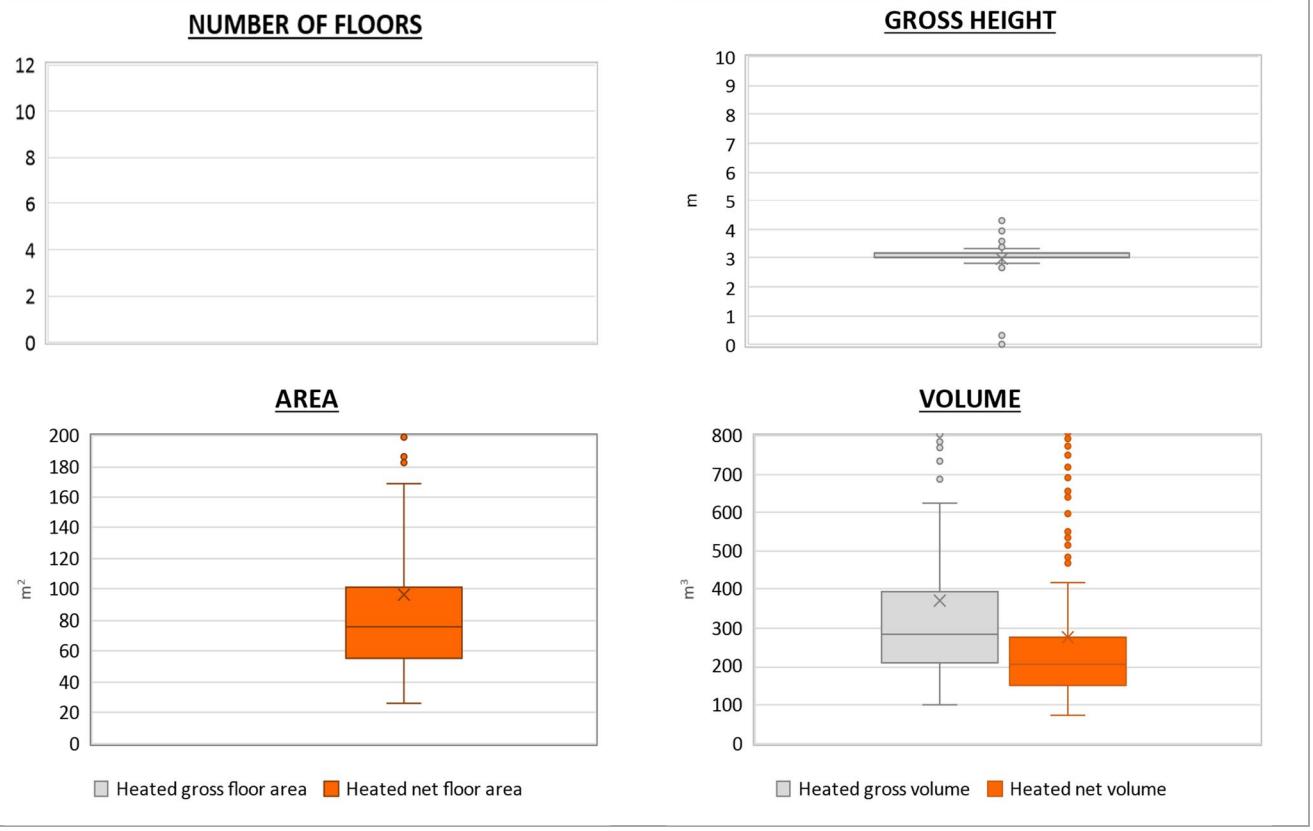


Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 2001-_E_LIG
Period of construction:	2001-			
Climatic zone:	E	**Number of records:**	247	

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	$A_{H;g}$	m²	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m²	96.1	66.1	55.6	75.8	101.3
	Heated gross volume	$V_{H;g}$	m³	371.1	284.1	211.0	283.5	392.5
	Heated net volume	$V_{H;n}$	m³	274.7	224.5	150.0	205.3	274.7
THERMAL SYSTEMS	Heating efficiency or *COP*	$\eta_{H;gen}$ 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 *EER*	$\eta_{C;gen}$ 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)

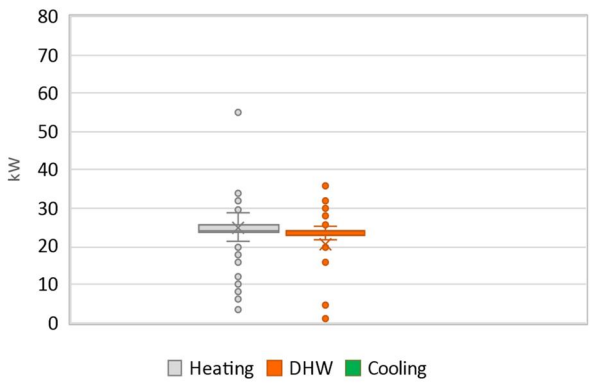


Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 2001-_E_LIG
Period of construction:	2001-			
Climatic zone:	E	**Number of records:**	247	

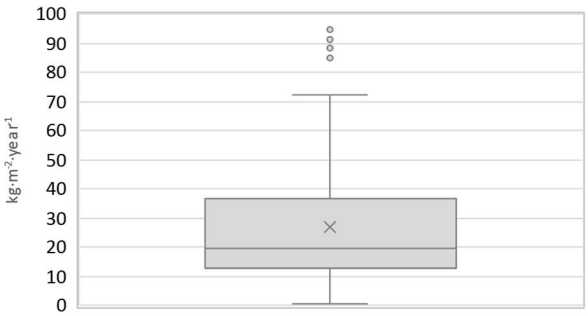
Additional data: other numerical variables that are not included in the archetype

DHW SUPPLY TEMPERATURE

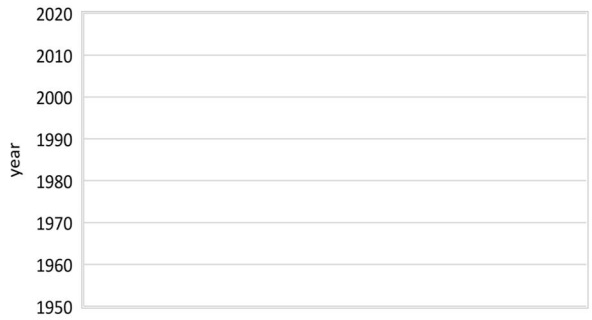
SYSTEM POWER



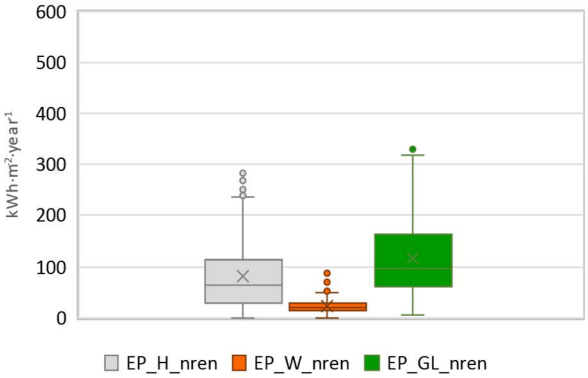
CO_2 EMISSION



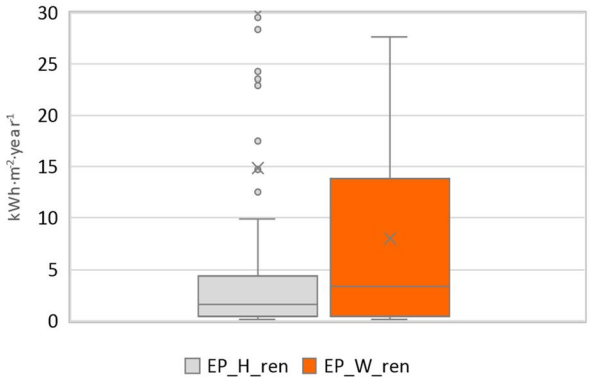
HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE



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