Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ -1950_C_LIG
Period of construction:	-1950			
Climatic zone:	C	**Number of records:**	5644	

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}	0.58	0.24	0.38	0.58	0.74
	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}	-	0.11	0.04	0.09	0.10	0.12
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fl;up}$	$W/(m^2 \cdot K)$	1.49	0.79	0.91	1.60	1.85
	External walls type	-						
	U-value of the wall	U_{wl}	$W/(m^2 \cdot K)$	1.75	0.65	1.27	1.77	2.28
	Slab on ground floor type	-						
	U-value of the floor	$U_{fl;lw}$	$W/(m^2 \cdot K)$	1.69	0.60	1.41	1.60	1.97
	Windows type	-						
	U-value of the windows	U_W	$W/(m^2 \cdot K)$	3.88	1.22	2.97	4.02	4.90
	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: 99%; Mechanical: 1%						
	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: 35%; Condensing boiler: 9%; Air-source heat pump: 8%; Fireplace: 2%						
	Daily operating time of the heating system *	t_H	h	10	0	10	10	10
	Energy carrier	Unknown: 48%; Natural gas: 31%; Electricity and natural gas: 10%; Electricity: 8%; LPG: 1%; Electricity and solid biomass: 1%; Gas Oil: 1%						
	Heating emission sub-system	Unknown: 46%; Radiators: 44%; Air Ducts: 3%; Fan-coil: 3%; Convectors: 2%; Radiant panels: 2%						
	Cooling system type	Unknown: 88%; Heat pump air-air: 11%; 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:73%; Electric boiler: 13%; Condensing boiler: 10%; Electric heat pump: 2%; Natural gas boiler: 2%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

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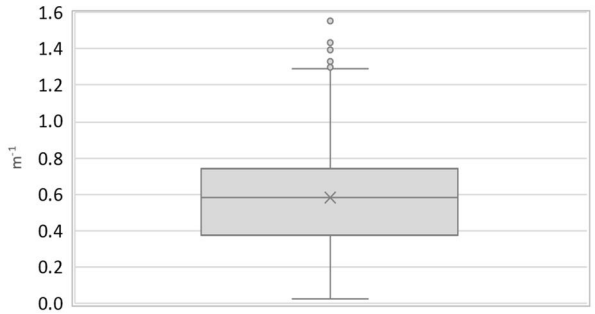
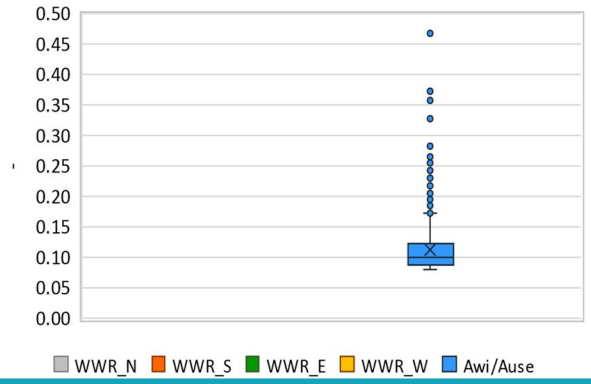
Climatic zone:	C	**Number of records:**	5644	

Numerical variables – GEOMETRY

COMPACTNESS RATIO

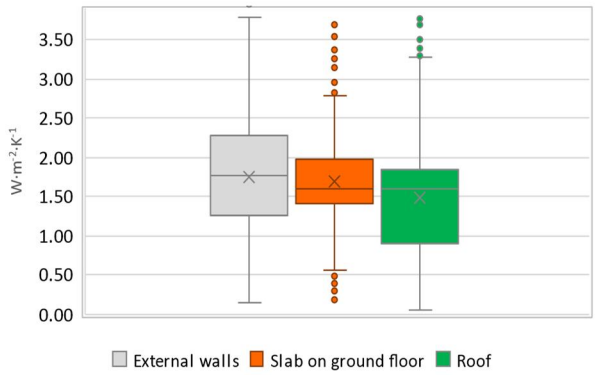


WINDOWS TO WALL RATIO

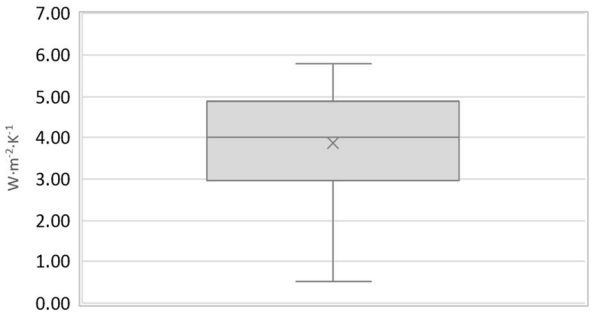


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

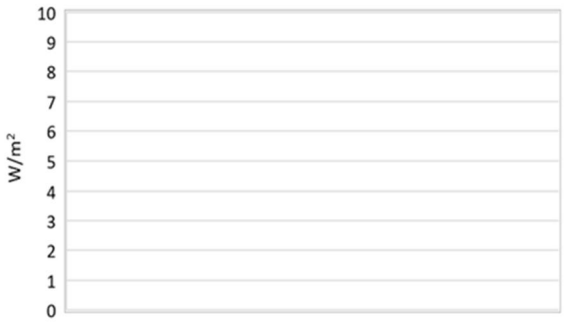


Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

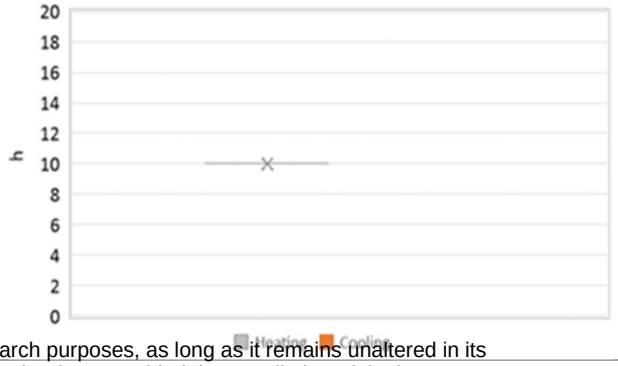
AIR EXCHANGE RATE

OCCUPANCY DENSITY

INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME

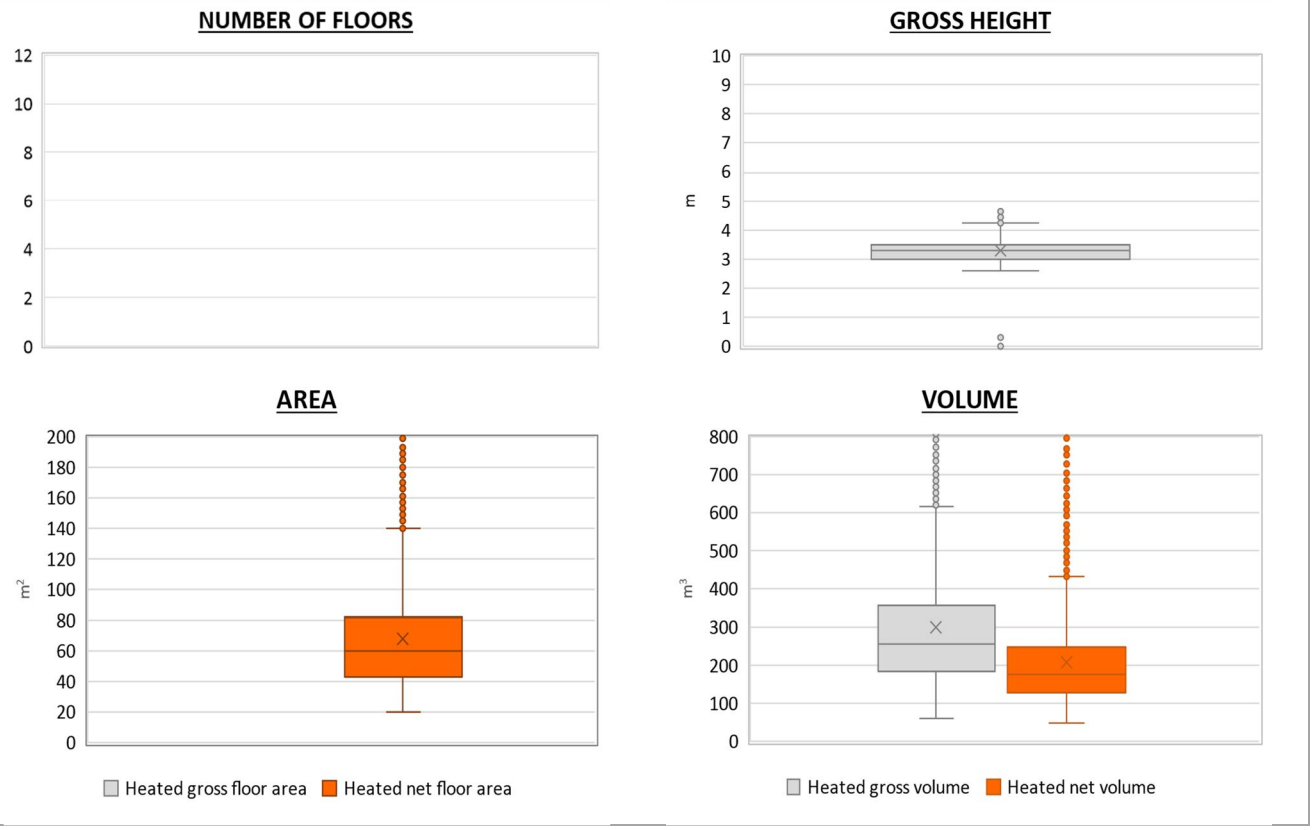


Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ -1950_C_LIG
Period of construction:	-1950			
Climatic zone:	C	**Number of records:**	5644	

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	3.3	0.4	3.0	3.3	3.5
	Heated gross floor area	$A_{H;g}$	m^2	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m^2	68.4	38.9	43.3	59.7	82.0
	Heated gross volume	$V_{H;g}$	m^3	298.5	182.9	184.0	257.6	357.2
	Heated net volume	$V_{H;n}$	m^3	207.3	130.0	126.3	176.8	249.3
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	21.4	7.1	22.0	24.0	24.0
	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	18.0	10.2	5.5	24.0	24.0
	* These values refer to the apartment scale							

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

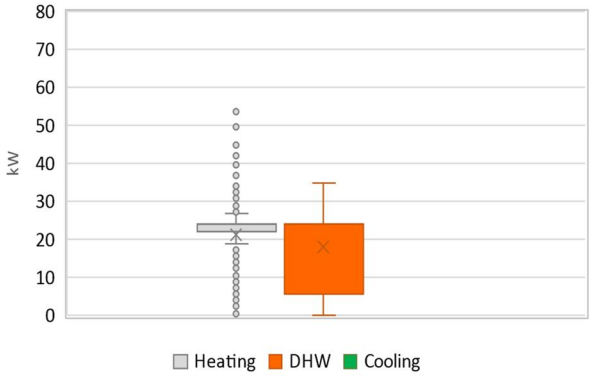


Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ -1950_C_LIG
Period of construction:	-1950			
Climatic zone:	C	**Number of records:**	5644	

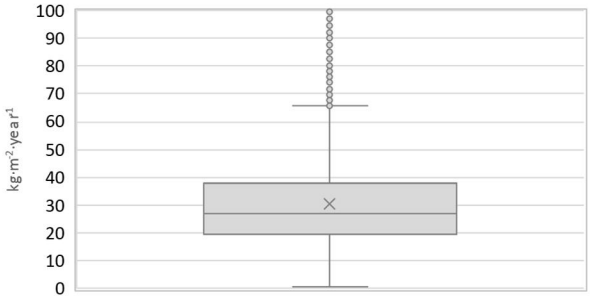
Additional data: other numerical variables that are not included in the archetype

DHW SUPPLY TEMPERATURE

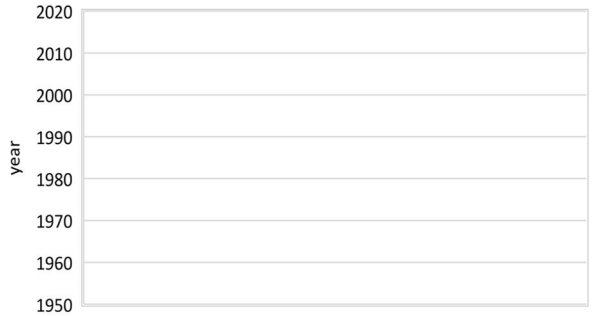
SYSTEM POWER



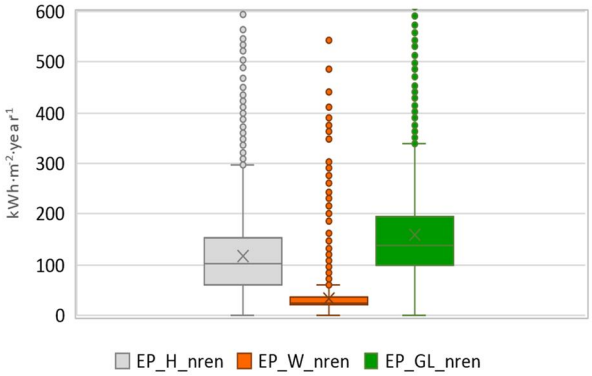
CO_2 EMISSION



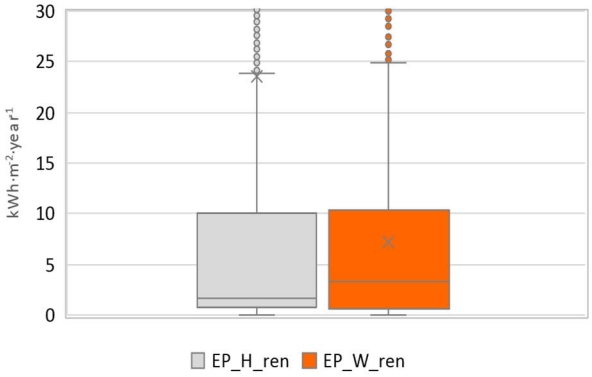
HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE



NOTE: Sample size of the analysed data.

Compactness ratio: 5582; Window to useful floor area ratio: 852; U-value of the roof: 1329; U-value of the wall: 4951; U-value of the floor: 473; U-value of the windows: 5390; Inter-storey height: 5636; Heated net floor area: 5636; Heated gross volume: 5586; Heated net volume: 5586; Total heating power: 2257; DHW system power: 3620; CO2 Emission: 5495; EP_H_nren: 5598; EP_W_nren: 5178; EP_GL_nren: 5597; EP_H_ren: 3241; EP_W_ren: 2805