Region:	Liguria			**Archetype code:** RES_BLDGS_ -1950_D_LIG
Building category:	Residential buildings – Entire multifamily blocks			
Period of construction:	-1950			
Climatic zone:	D	**Number of records:**	1515	

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	$A_{footprint}$	m²	-	-	-	-	-
	Heated gross floor area	$A_{H;g}$	m²	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m²	487.0	1279.1	65.0	100.0	228.1
	Heated gross volume	$V_{H;g}$	m³	2193.2	5785.0	272.5	420.0	932.7
	Heated net volume	$V_{H;n}$	m³	1600.1	4407.9	181.6	279.9	631.6
	Compactness ratio	$A_{env}/V_{H;g}$	m⁻¹	0.67	0.32	0.41	0.68	0.86
	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}	-	0.12	0.12	0.09	0.10	0.11
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fl;up}$	W/(m²·K)	1.37	0.81	0.72	1.45	1.76
	External walls type	-						
	U-value of the wall	U_{wl}	W/(m²·K)	1.55	0.67	1.14	1.51	2.04
	Slab on ground floor type	-						
	U-value of the floor	$U_{fl;lw}$	W/(m²·K)	1.55	0.61	1.30	1.54	1.80
	Windows type	-						
	U-value of the windows	U_W	W/(m²·K)	3.77	1.26	2.86	3.76	4.78
	Shading system type	-						
GAINS and VENTILATION	Occupancy density *	O_C	person/m²	UNI EN 16798-1 - Table A.19				
	Lighting power density *	W_L	W/m²	UNI EN 16798-1 - A.8.3				
	Equipment power density *	W_A	W/m²	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: 95%; Autonomous: 4%; Centralized: 1%						
	Heating generator	Unknown: 46%; Traditional boiler: 33%; Condensing boiler: 12%; Air-source heat pump: 5%; Fireplace: 3%; Electric heating: 1%						
	Daily operating time of the heating system *	t_H	h	12	0	12	12	12
	Energy carrier	Unknown: 45%; Natural gas: 32%; Electricity and natural gas: 10%; Electricity: 6%; Electricity and solid biomass: 2%; Solid biomass: 2%; LPG: 2%; Gas Oil: 1%						
	Heating emission sub-system	Radiators: 46%; Unknown: 45%; Fan-coil: 3%; Air Ducts: 3%; Radiant panels: 2%; Convectors: 1%						
	Cooling system type	Unknown: 88%; Heat pump air-air: 9%; Heat pump air-water: 3%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	-						
	DHW generator	Unknown: 72%; Condensing boiler: 11%; Electric boiler: 11%; Natural gas boiler: 3%; Electric heat pump: 2%; Solar thermal: 1%						

* These values were not available in the considered sources, and are thus derived from UNI EN Standards

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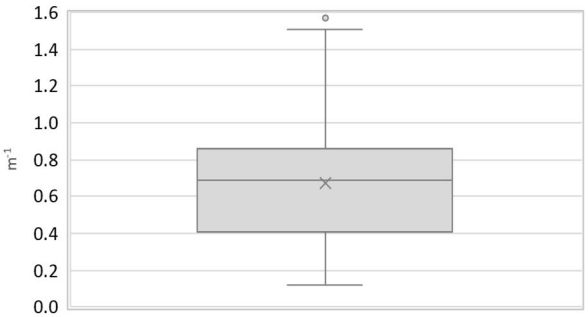
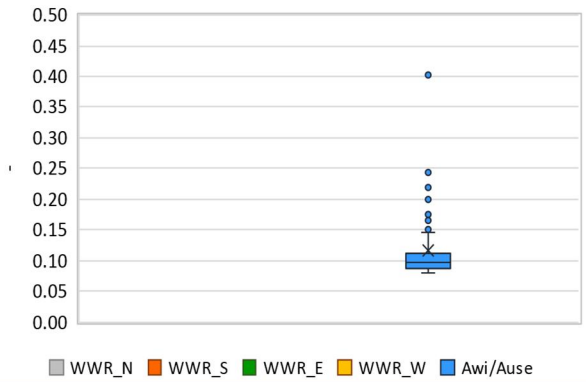
Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Entire multifamily blocks			RES_BLDGS_ -1950_D_LIG
Period of construction:	-1950			
Climatic zone:	D	**Number of records:**	1515	

Numerical variables – GEOMETRY

COMPACTNESS RATIO

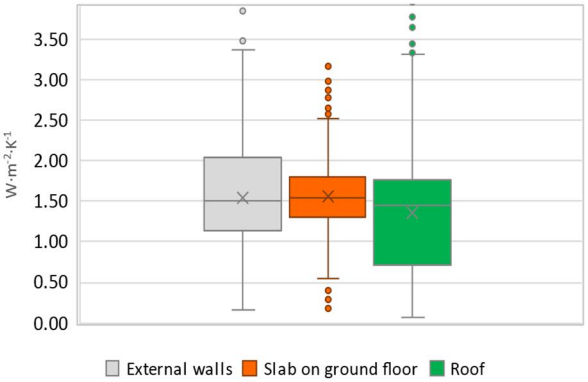


WINDOWS TO WALL RATIO

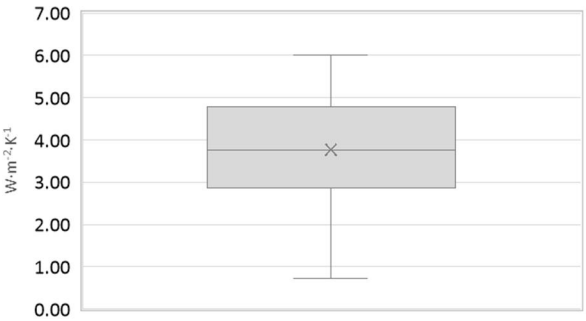


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE

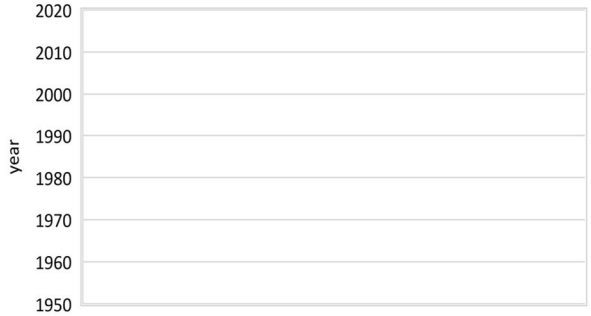


WINDOWS U-VALUE

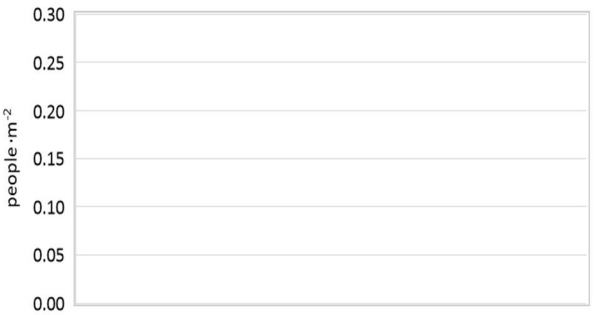


Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

HEATING SYSTEM INSTALLATION YEAR

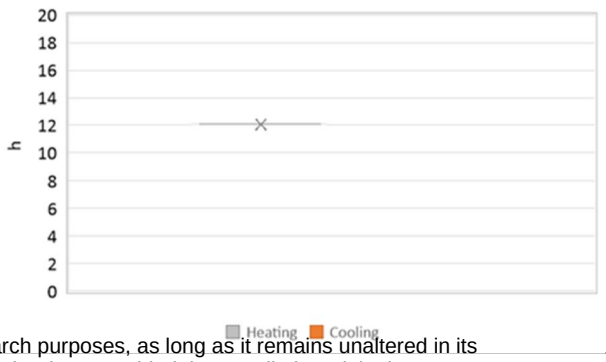


OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY

DAILY OPERATING TIME



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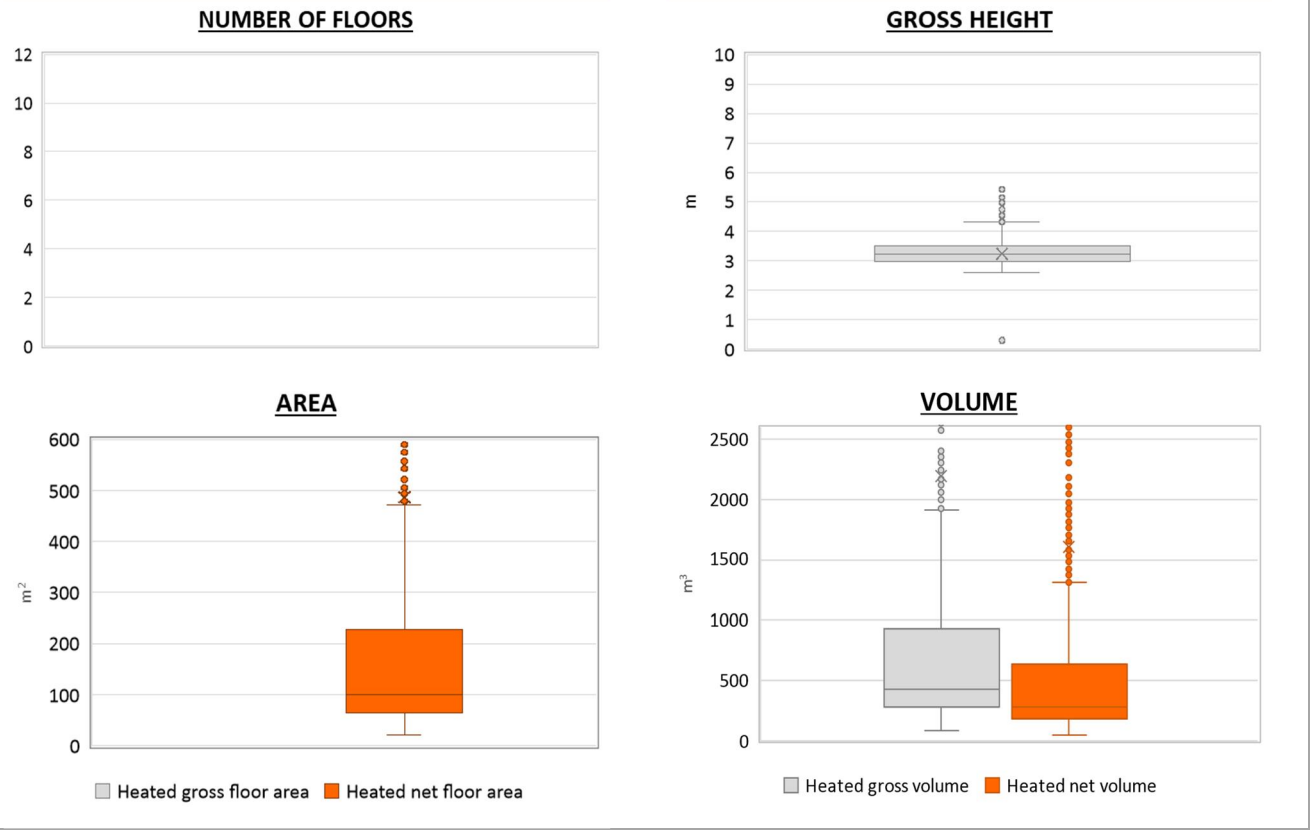
Region:	Liguria			Archetype code:
Building category:	Residential buildings – Entire multifamily blocks			RES_BLDGS_ -1950_D_LIG
Period of construction:	-1950			
Climatic zone:	D	Number of records:	1515	

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	0.5	3.0	3.2	3.5
	Heated gross floor area	$A_{H;g}$	m²	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m²	-	-	-	-	-
	Heated gross volume	$V_{H;g}$	m³	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m³	-	-	-	-	-
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	58.9	105.3	23.4	24.0	30.0
	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	19.0	10.8	8.1	24.0	25.0
	* These values refer to the apartment scale							

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



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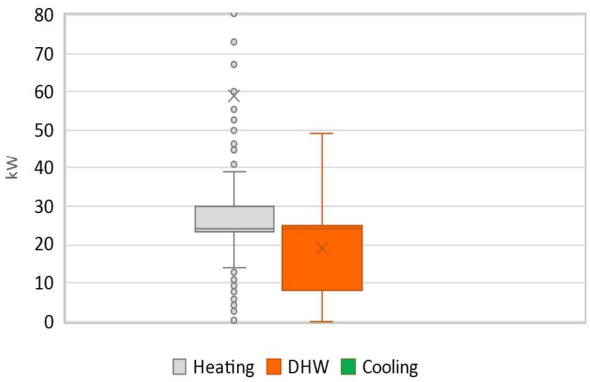
Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Entire multifamily blocks			RES_BLDGS_ -1950_D_LIG
Period of construction:	-1950			
Climatic zone:	D	**Number of records:**	1515	

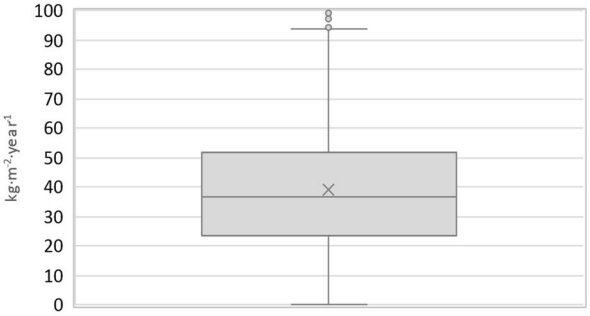
Additional data: other numerical variables that are not included in the archetype

DHW SUPPLY TEMPERATURE

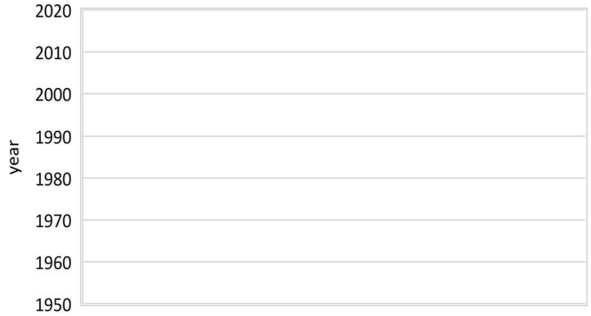
SYSTEM POWER



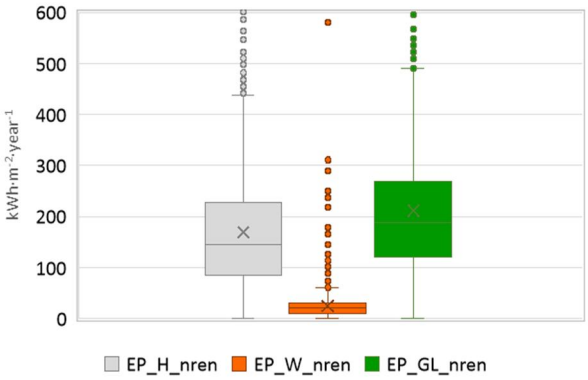
CO_2 EMISSION



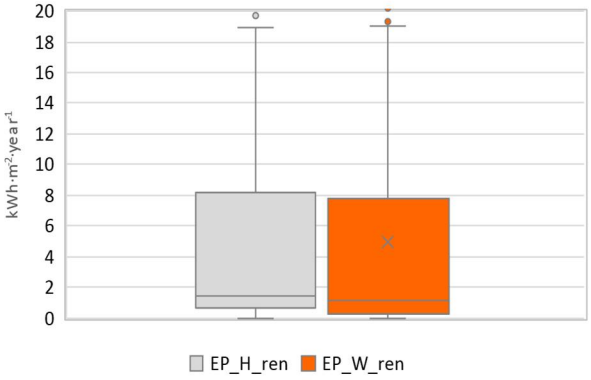
HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE



NOTE: Sample size of the analysed data.

Compactness ratio: 1501; Window to useful floor area ratio: 159; U-value of the roof: 719; U-value of the wall: 1391; U-value of the floor: 233; U-value of the windows: 1515; Inter-storey height: 1515; Heated net floor area: 1515; Heated gross volume: 1461; Heated net volume: 1461; Total heating power: 627; DHW system power: 912; CO2 Emission: 1440; EP_H_nren: 1502; EP_W_nren: 1383; EP_GL_nren: 1500; EP_H_ren: 1081; EP_W_ren: 1000

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