Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 1971-1980_C_LIG
Period of construction:	1971-1980			
Climatic zone:	C	**Number of records:**	4084	

Description:

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

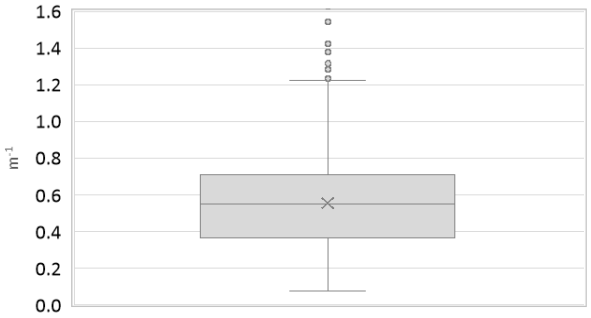
Data sources:
EPC databases (100%)

	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}	0.56	0.24	0.36	0.55	0.71
	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	0.07	0.09	0.10	0.12
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fl;up}$	$W/(m^2 \cdot K)$	1.46	0.51	1.27	1.61	1.73
	External walls type	-						
	U-value of the wall	U_{wl}	$W/(m^2 \cdot K)$	1.22	0.34	1.10	1.23	1.36
	Slab on ground floor type	-						
	U-value of the floor	$U_{fl;lw}$	$W/(m^2 \cdot K)$	1.45	0.39	1.36	1.54	1.63
	Windows type	-						
	U-value of the windows	U_W	$W/(m^2 \cdot K)$	4.23	1.24	3.32	4.52	5.24
	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	Unknown: 95%; Autonomous: 5%						
	Heating generator	Traditional boiler: 46%; Unknown: 34%; Condensing boiler: 16%; Air-source heat pump: 3%; Fireplace: 1%						
	Daily operating time of the heating system *	t_H	h	10	0	10	10	10
	Energy carrier	Natural gas: 44%; Unknown: 34%; Electricity and natural gas: 13%; Electricity: 3%; Gas Oil: 3%; LPG: 1%; Electricity and gas oil: 1%; Electricity and solid biomass: 1%						
	Heating emission sub-system	Radiators: 62%; Unknown: 34%; Fan-coil: 1%; Air Ducts: 1%; Convectors: 1%; Radiant panels: 1%						
	Cooling system type	Unknown: 93%; Heat pump air-air: 7%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	-						
	DHW generator	Unknown: 63%; Electric boiler: 20%; Condensing boiler: 7%; Electric heat pump: 6%; Natural gas boiler: 4%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

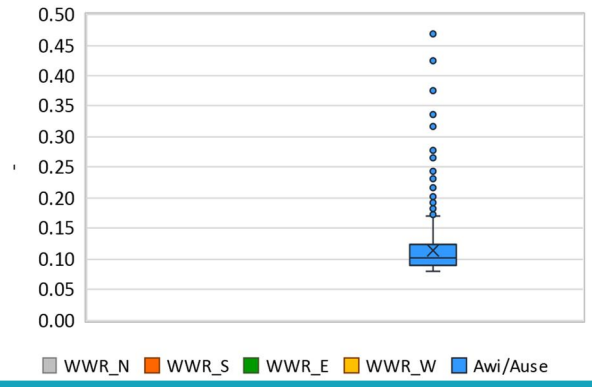
Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 1971-1980_C_LIG
Period of construction:	1971-1980			
Climatic zone:	C	**Number of records:**	4084	

Numerical variables – GEOMETRY

COMPACTNESS RATIO

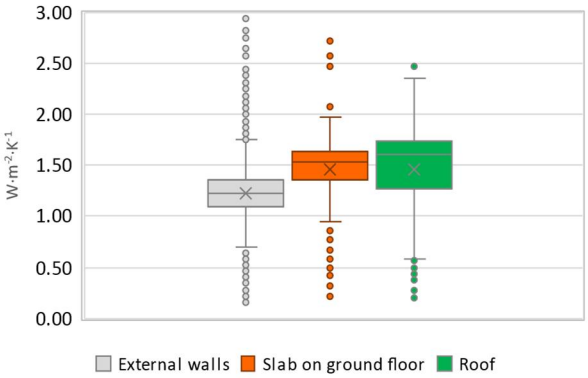


WINDOWS TO WALL RATIO

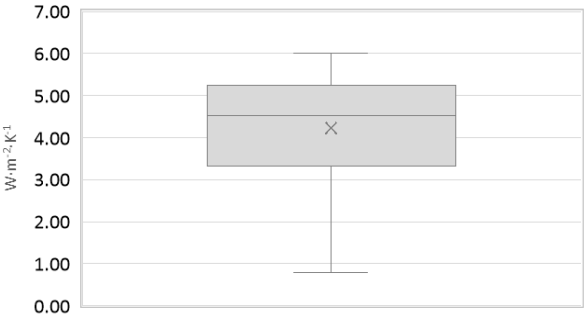


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE

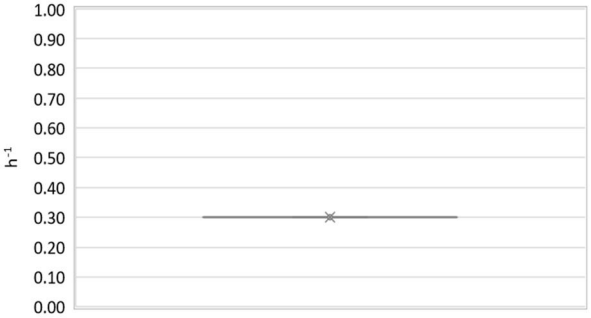


WINDOWS U-VALUE



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

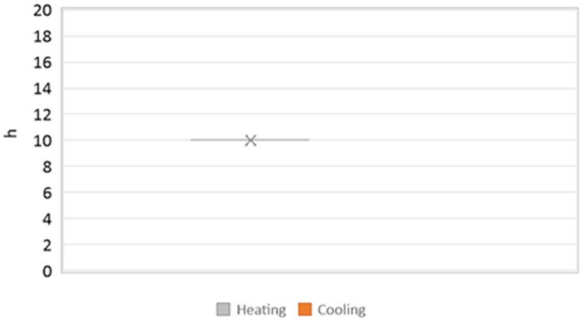
AIR EXCHANGE RATE



OCCUPANCY DENSITY

INTERNAL GAINS POWER DENSITY

DAILY OPERATING TIME

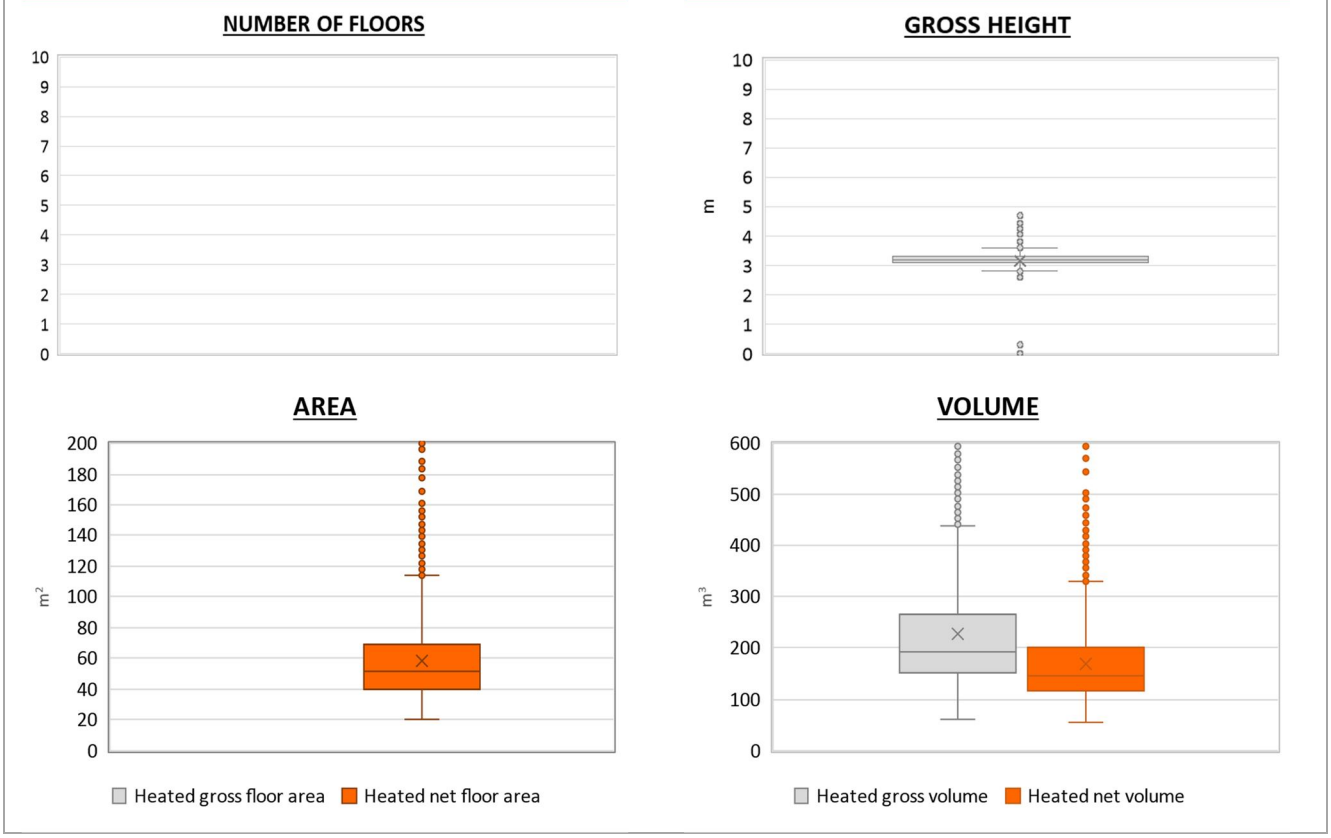


Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 1971-1980_C_LIG
Period of construction:	1971-1980			
Climatic zone:	C	**Number of records:**	4084	

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	3.2	0.2	3.1	3.2	3.3
	Heated gross floor area	$A_{H;g}$	m²	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m²	58.2	29.1	39.9	51.0	69.4
	Heated gross volume	$V_{H;g}$	m³	227.2	160.4	152.9	193.9	267.1
	Heated net volume	$V_{H;n}$	m³	168.7	87.3	115.4	146.3	201.0
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	21.3	8.2	20.0	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	15.2	11.1	1.2	22.0	24.0
	* These values refer to the apartment scale							

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

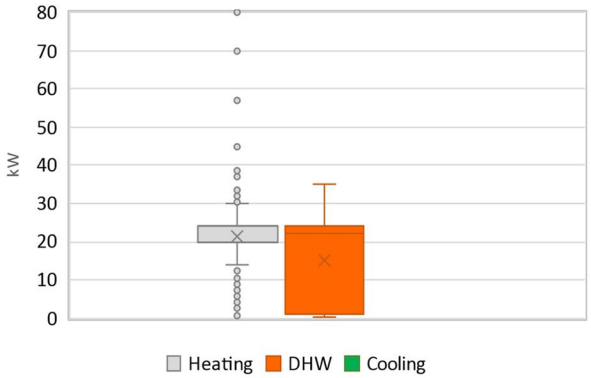


Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 1971-1980_C_LIG
Period of construction:	1971-1980			
Climatic zone:	C	**Number of records:**	4084	

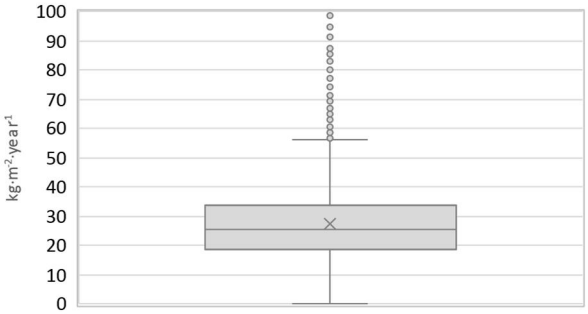
Additional data: other numerical variables that are not included in the archetype

DHW SUPPLY TEMPERATURE

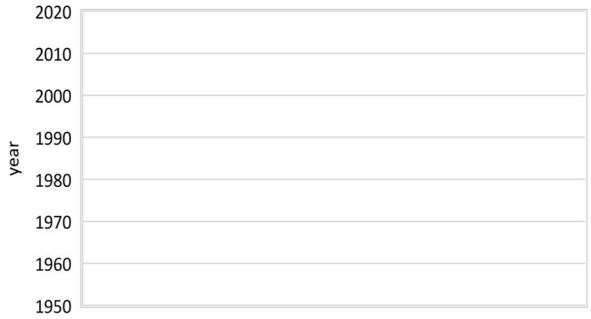
SYSTEM POWER



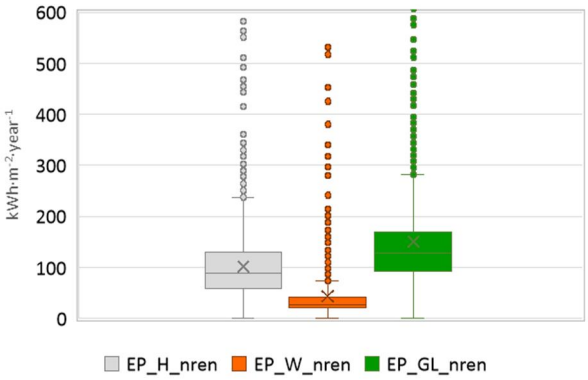
CO_2 EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE