Region:	Liguria		Archetype code:
Building category:	Residential buildings – Single family houses		RES_SINGLE_ 1981-1990_C_LIG
Period of construction:	1981-1990		
Climatic zone:	C	Number of records: 702	

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	-	-	-	-	-
	Heated gross volume	$V_{H;g}$	m³	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m³	-	-	-	-	-
	Compactness ratio	$A_{env}/V_{H;g}$	m⁻¹	0.73	0.36	0.43	0.69	0.95
	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	0.05	0.09	0.11	0.13
ENVELOPE	Roof type		-					
	U-value of the roof	$U_{fl;up}$	W/(m²·K)	1.27	0.63	0.62	1.46	1.74
	External walls type		-					
	U-value of the wall	U_{wl}	W/(m²·K)	1.21	0.49	0.89	1.21	1.42
	Slab on ground floor type		-					
	U-value of the floor	$U_{fl;lw}$	W/(m²·K)	1.52	0.37	1.39	1.54	1.67
	Windows type		-					
	U-value of the windows	U_W	W/(m²·K)	3.99	1.11	3.10	4.09	4.76
	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: 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: 91%; Autonomous: 9%				
	Heating generator			Traditional boiler: 51%; Unknown: 36%; Condensing boiler: 8%; Air-source heat pump: 2%; Fireplace: 2%; Electric heating: 1%				
	Daily operating time of the heating system *	t_H	h	10	0	10	10	10
	Energy carrier			Natural gas: 43%; Unknown: 36%; Electricity and natural gas: 7%; LPG: 5%; Electricity: 3%; Gas Oil: 3%; Electricity and solid biomass: 2%; Solid biomass: 1%				
	Heating emission sub-system			Radiators: 61%; Unknown: 36%; Air Ducts: 2%; Fan-coil: 1%				
	Cooling system type			Unknown: 95%; Heat pump air-air: 5%				
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system		-					
	DHW system type		-					
	DHW generator			Unknown: 81%; Electric boiler: 8%; Condensing boiler: 7%; 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							

Region:	Liguria		Archetype code:
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Numerical variables – GEOMETRY

COMPACTNESS RATIO

WINDOWS TO WALL RATIO

☐ WWR_N ☐ WWR_S ☐ WWR_E ☐ WWR_W ☐ Awi/Ause
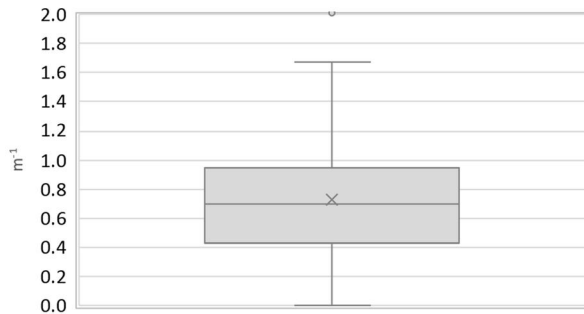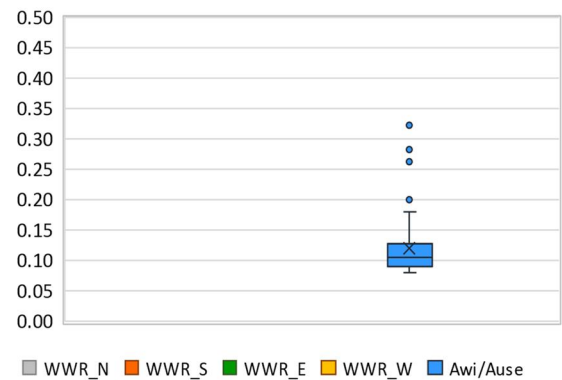
Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE

☐ External walls ☐ Slab on ground floor ☐ Roof
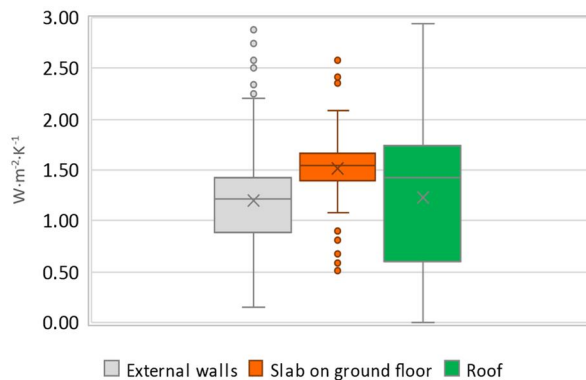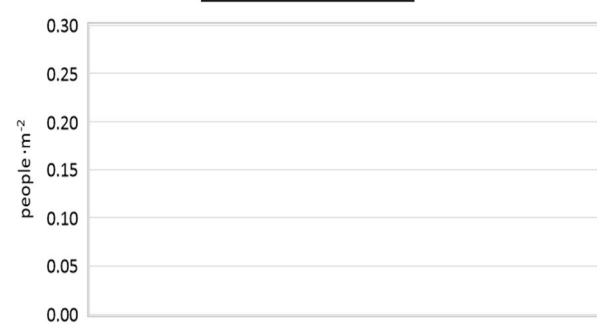
WINDOWS U-VALUE
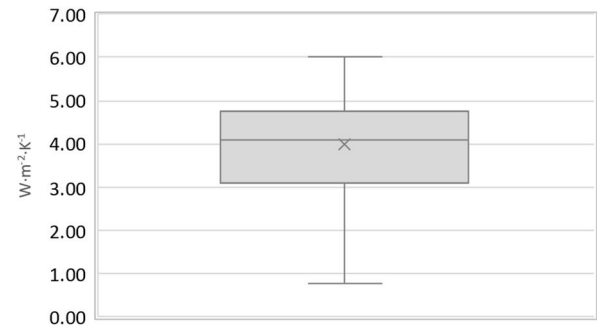
Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

AIR EXCHANGE RATE

OCCUPANCY DENSITY
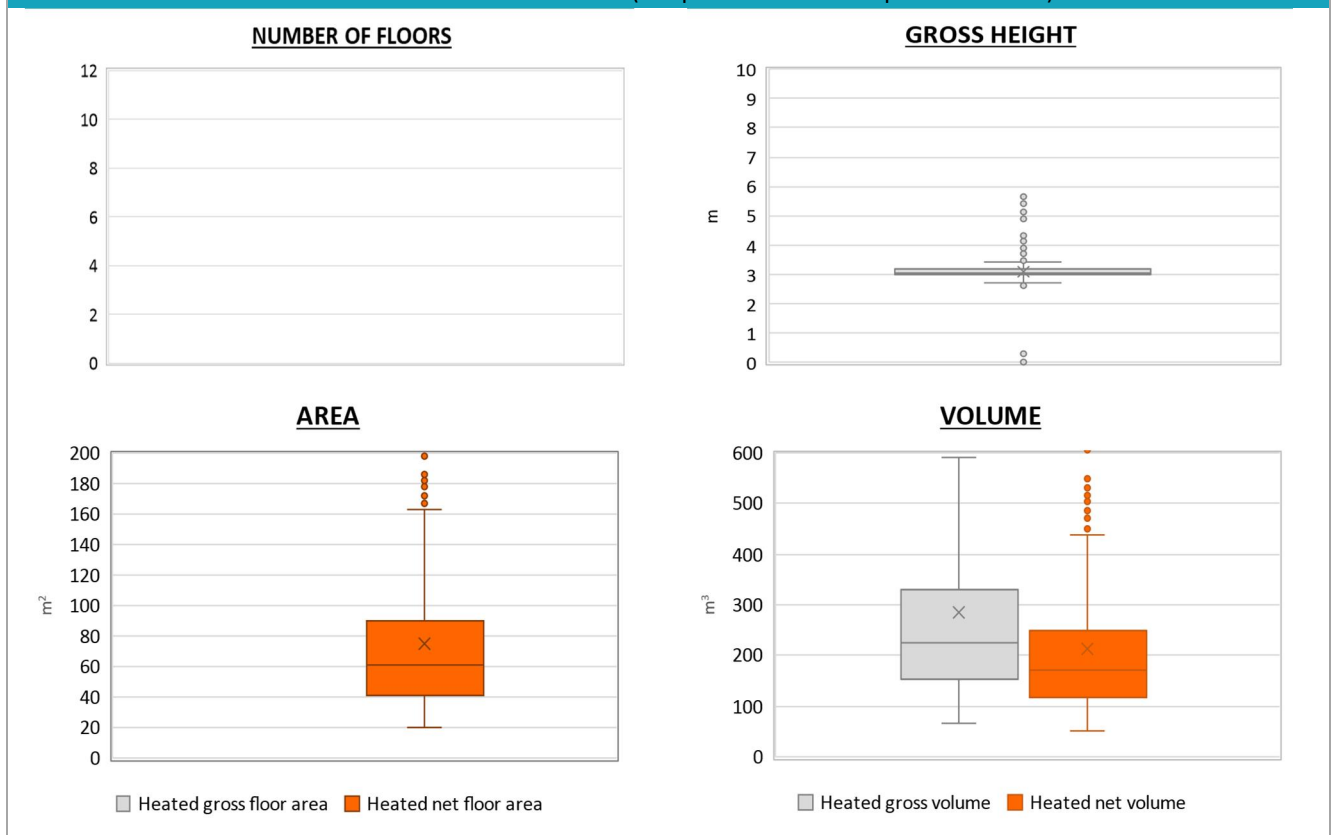

INTERNAL GAINS POWER DENSITY

DAILY OPERATING TIME

☐ Heating ☐ Cooling

Region:	Liguria		Archetype code:
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Period of construction:	1981-1990		
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	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	75.1	56.1	41.0	61.4	90.0
	Heated gross volume	$V_{H;g}$	m³	285.3	230.9	152.6	225.1	331.1
	Heated net volume	$V_{H;n}$	m³	214.4	177.6	116.4	170.4	248.8
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	23.5	5.9	24.0	24.0	24.6
	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	20.8	8.4	21.0	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

VOLUME

Heated gross floor area | Heated net floor area

Heated gross volume | Heated net volume

Region:	Liguria	Archetype code:
Building category:	Residential buildings – Single family houses	RES_SINGLE_ 1981-1990_C_LIG
Period of construction:	1981-1990	
Climatic zone:	C	Number of records: 702

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

DHW SUPPLY TEMPERATURE

SYSTEM POWER

☐ Heating ■ DHW ■ Cooling

CO₂ EMISSION

HEATING SYSTEM INSTALLATION YEAR

NON-RENEWABLE PRIMARY ENERGY USE

☐ EP_H_nren ■ EP_W_nren ■ EP_GL_nren

RENEWABLE PRIMARY ENERGY USE

☐ EP_H_ren ■ EP_W_ren
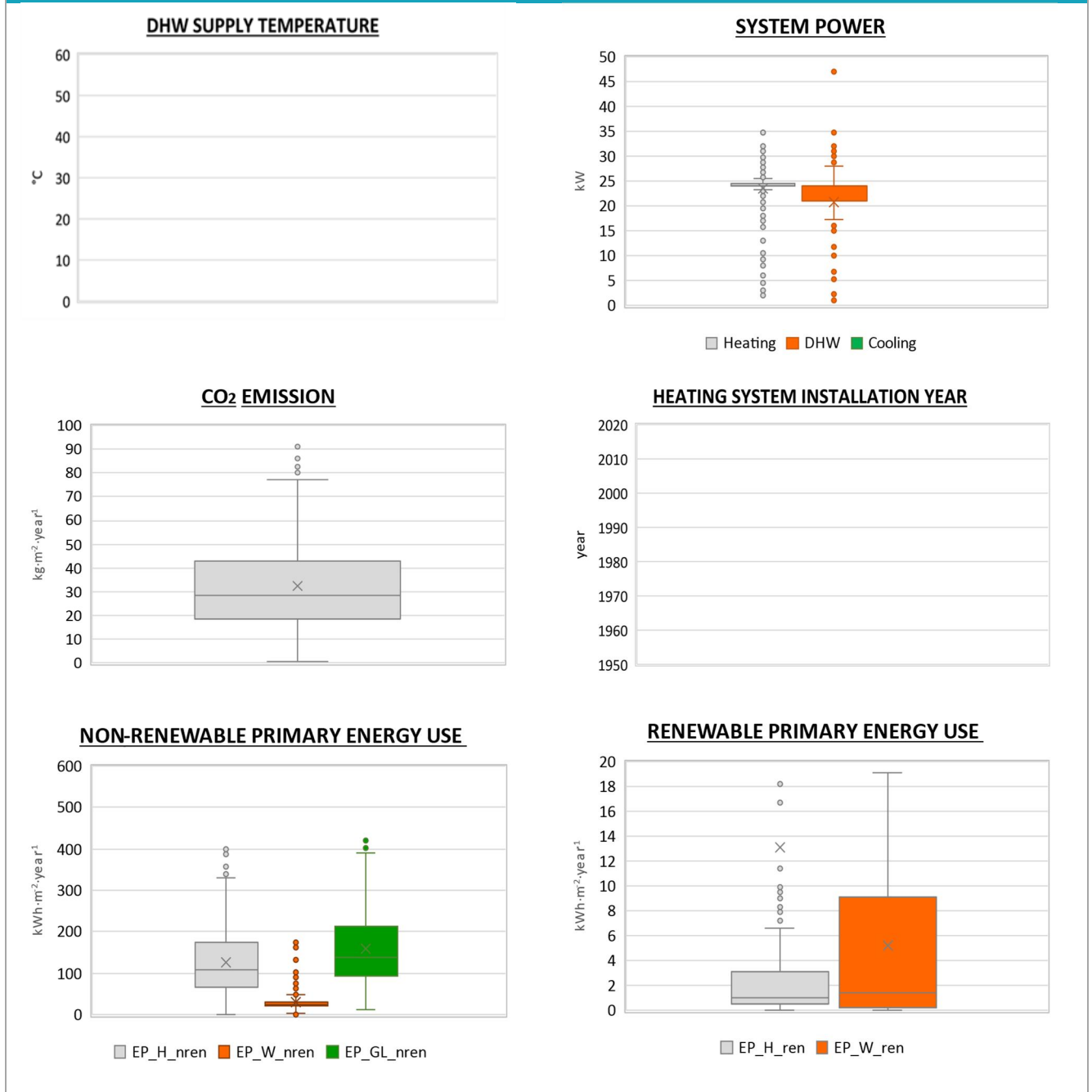
NOTE: Sample size of the analysed data.

Compactness ratio: 700; Window to useful floor area ratio: 110; U-value of the roof: 186; U-value of the wall: 606; U-value of the floor: 70; U-value of the windows: 702; Inter-storey height: 700; Heated net floor area: 700; Heated gross volume: 698; Heated net volume: 698; Total heating power: 317; DHW system power: 513; CO2 Emission: 692; EP_H_nren: 696; EP_W_nren: 678; EP_GL_nren: 692; EP_H_ren: 450; EP_W_ren: 296