Region:	Liguria		Archetype code:
Building category:	Residential buildings – Entire multifamily blocks		RES_BLDGS_ 1971-1980_E_LIG
Period of construction:	1971-1980		
Climatic zone:	E	Number of records: 83	

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	148.6	332.2	70.0	95.0	128.1
	Heated gross volume	$V_{H;g}$	m³	554.9	1098.3	266.9	374.0	491.6
	Heated net volume	$V_{H;n}$	m³	430.8	970.8	194.6	290.5	364.2
	Compactness ratio	$A_{env}/V_{H;g}$	m⁻¹	0.80	0.27	0.61	0.86	1.01
	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}	-	-	-	-	-	-
ENVELOPE	Roof type		-					
	U-value of the roof	$U_{fl;up}$	W/(m²·K)	1.62	0.60	1.29	1.79	1.95
	External walls type		-					
	U-value of the wall	U_{wl}	W/(m²·K)	1.22	0.45	1.02	1.22	1.48
	Slab on ground floor type		-					
	U-value of the floor	$U_{fl;lw}$	W/(m²·K)	-	-	-	-	-
	Windows type		-					
	U-value of the windows	U_W	W/(m²·K)	4.11	1.19	3.18	4.39	4.94
	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: 96%; Autonomous: 4%					
	Heating generator		Unknown: 50%; Traditional boiler: 28%; Fireplace: 12%; Condensing boiler: 8%; Air-source heat pump: 1%; Water-source heat pump: 1%					
	Daily operating time of the heating system *	t_H	h	14	0	14	14	14
	Energy carrier		Unknown: 51%; Natural gas: 17%; Electricity and solid biomass: 8%; Electricity and natural gas: 8%; Gas Oil: 5%; Solid biomass: 4%; Electricity and gas oil: 4%; Electricity: 2%; LPG: 1%					
	Heating emission sub-system		Unknown: 49%; Radiators: 45%; Air Ducts: 5%; Convectors: 1%					
	Cooling system type		Unknown: 97%; Heat pump air-air: 2%; 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: 57%; Electric boiler: 19%; Natural gas boiler: 10%; Condensing boiler: 8%; Electric heat pump: 6%					
	* 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 – Entire multifamily blocks		RES_BLDGS_ 1971-1980_E_LIG
Period of construction:	1971-1980		
Climatic zone:	E	Number of records: 83	

Numerical variables – GEOMETRY

COMPACTNESS RATIO
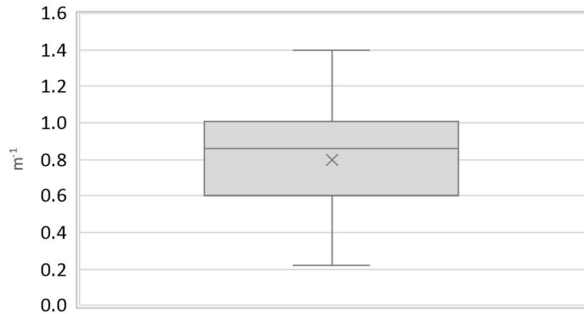
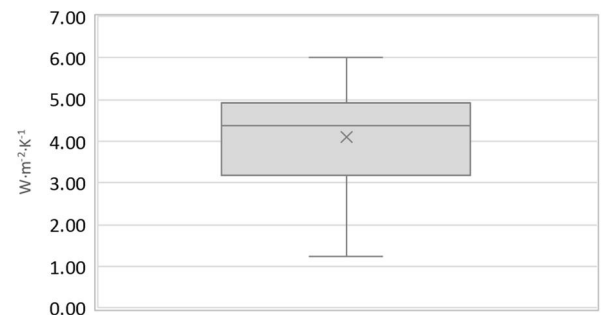### WINDOWS TO WALL RATIO

WWR_N ■ WWR_S ■ WWR_E ■ WWR_W ■ Awi/Ause

Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE
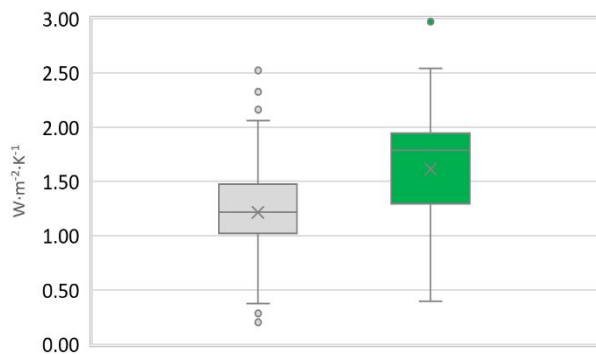
■ External walls ■ Slab on ground floor ■ Roof

WINDOWS U-VALUE

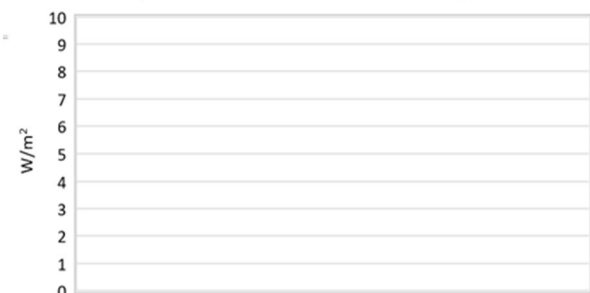## Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

AIR EXCHANGE RATE

OCCUPANCY DENSITY

INTERNAL GAINS POWER DENSITY

DAILY OPERATING TIME

■ Heating ■ Cooling

Region:	Liguria				Archetype code:		
Building category:	Residential buildings – Entire multifamily blocks				RES_BLDGS_ 1971-1980_E_LIG		
Period of construction:	1971-1980						
Climatic zone:	E		Number of records:	83			

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	3.0	3.1	3.3
	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	24.4	9.3	20.8	24.0	29.5
	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	16.2	11.8	1.5	20.6	24.8
	* These values refer to the apartment scale							

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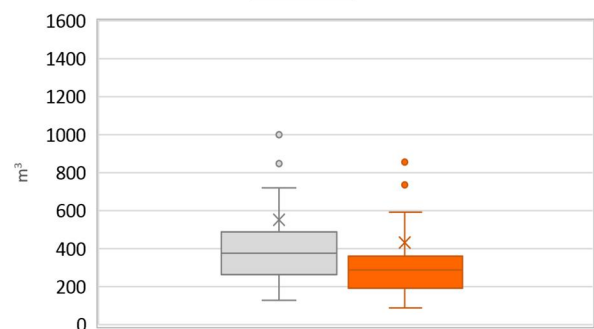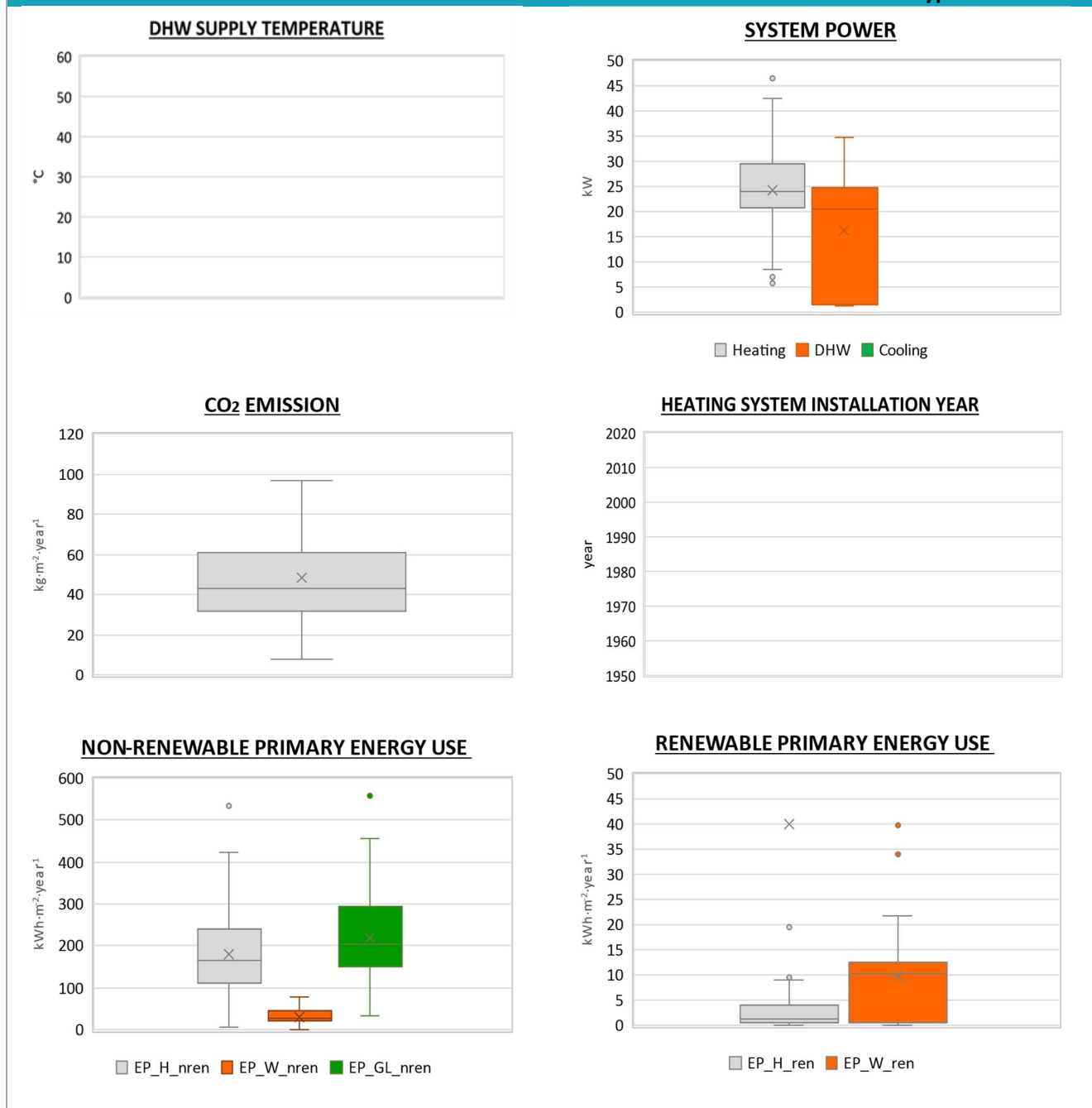
NUMBER OF FLOORS

GROSS HEIGHT
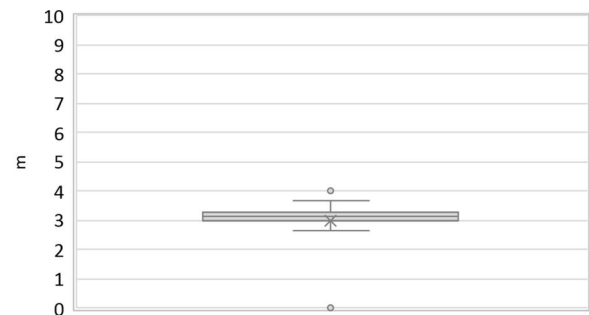
AREA
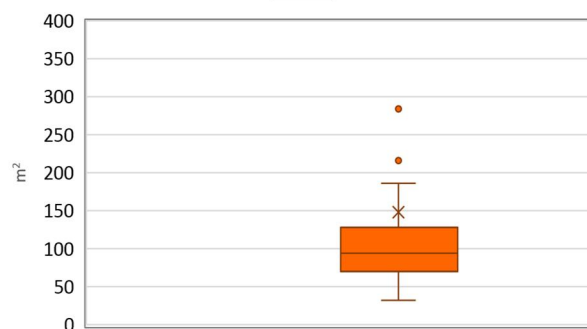
☐ Heated gross floor area ■ Heated net floor area

VOLUME

☐ Heated gross volume ■ Heated net volume

Residential buildings – Entire multifamily blocks – 1971-1980 – Zone E – Italy

Region:	Liguria		Archetype code:
Building category:	Residential buildings – Entire multifamily blocks		RES_BLDGS_ 1971-1980_E_LIG
Period of construction:	1971-1980		
Climatic zone:	E	Number of records: 83	

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: 79; U-value of the roof: 30; U-value of the wall: 79; U-value of the windows: 83; Inter-storey height: 79; Heated net floor area: 79; Heated gross volume: 79; Heated net volume: 79; Total heating power: 33; DHW system power: 62; CO2 Emission: 75; EP_H_nren: 83; EP_W_nren: 77; EP_GL_nren: 83; EP_H_ren: 55; EP_W_ren: 50