Region:	Liguria		Archetype code:
Building category:	Residential buildings – Single family houses		RES_SINGLE_ 1981-1990_F_LIG
Period of construction:	1981-1990		
Climatic zone:	F	Number of records:	280

Description:	Data sources:
External walls: no data available Roof slabs: no data available	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	0.69	0.15	0.54	0.73	0.80
	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)	-	-	-	-	-
	External walls type		-					
	U-value of the wall	U_{wl}	W/(m²·K)	1.18	0.42	0.95	1.12	1.51
	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)	4.02	1.22	3.13	4.24	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: 100%				
	Air exchange rate *	n	h⁻¹	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type			Unknown: 94%; Autonomous: 6%				
	Heating generator			Traditional boiler: 53%; Unknown: 41%; Condensing boiler: 6%				
	Daily operating time of the heating system *			No limitations				
	Energy carrier			Unknown: 40%; Natural gas: 24%; Gas Oil: 12%; LPG: 12%; Electricity and gas oil: 6%; Electricity and natural gas: 6%				
	Heating emission sub-system			Radiators: 59%; Unknown: 41%				
	Cooling system type			-				
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system			-				
	DHW system type			-				
	DHW generator			Unknown: 76%; Electric boiler: 6%; Electric heat pump: 6%; Natural gas boiler: 6%; Condensing boiler: 6%				
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

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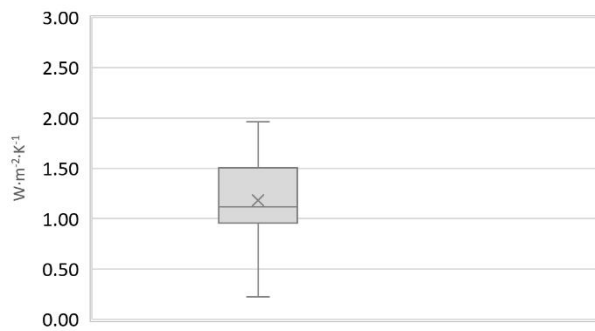## Numerical variables – GEOMETRY

COMPACTNESS RATIO
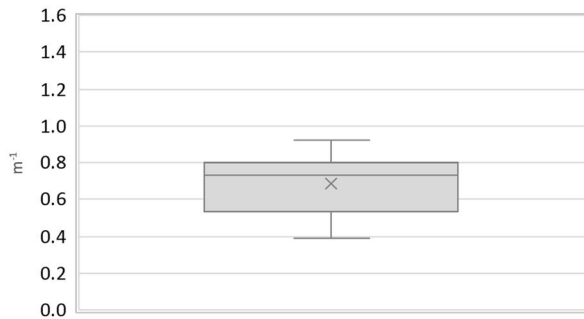
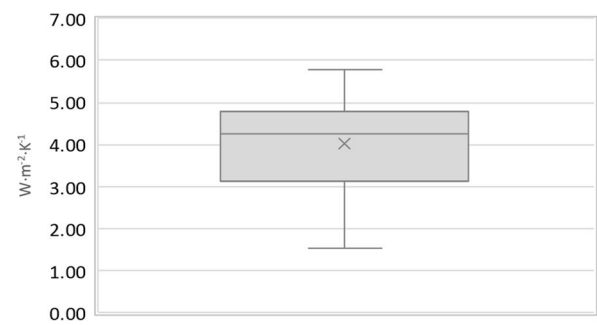### WINDOWS TO WALL RATIO

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)
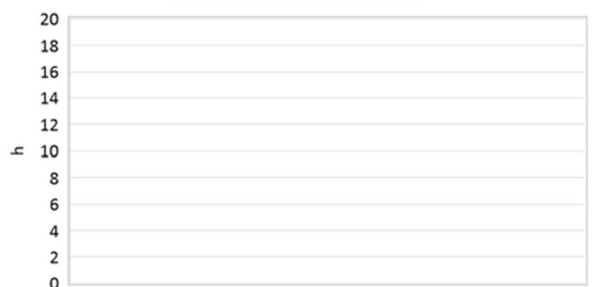
AIR EXCHANGE RATE

OCCUPANCY DENSITY

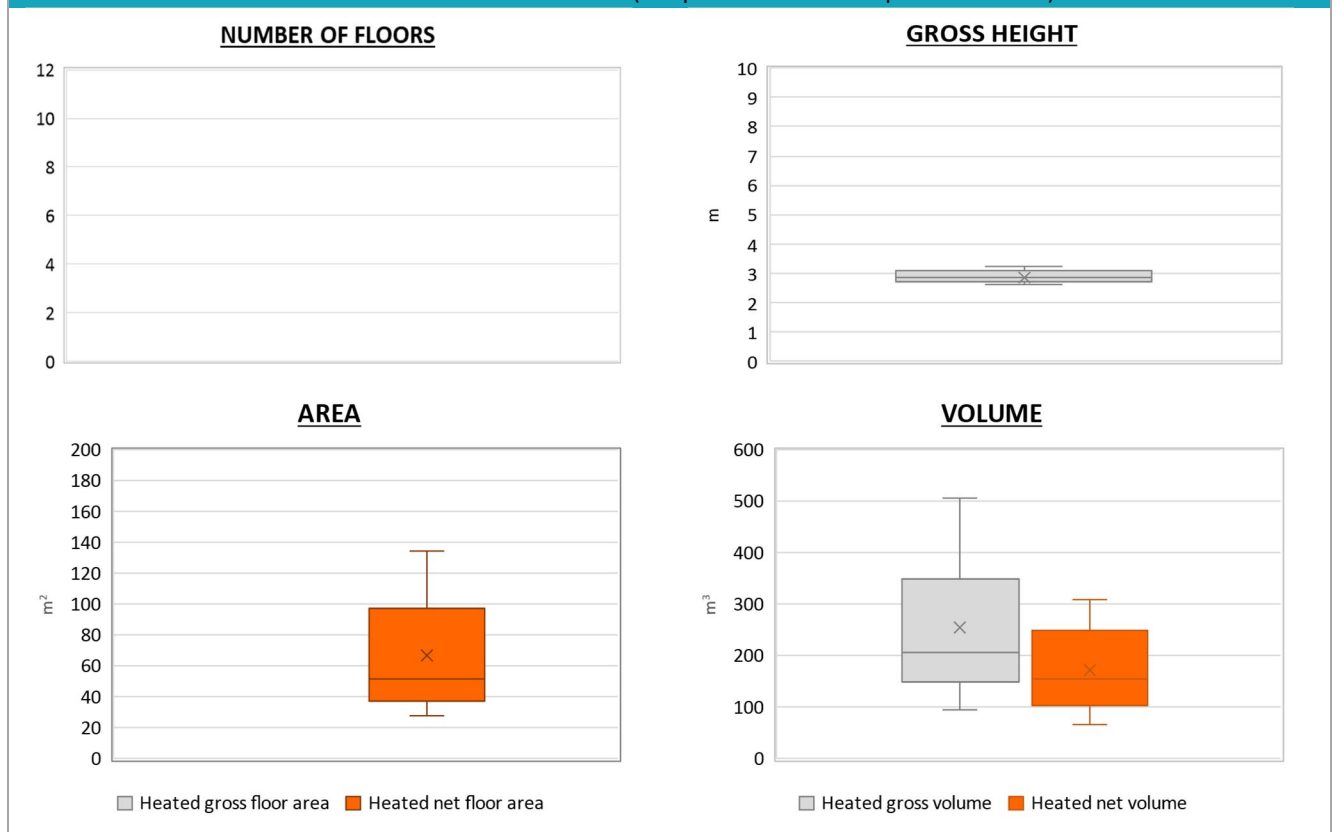### INTERNAL GAINS POWER DENSITY

DAILY OPERATING TIME

Heating   Cooling

Region:	Liguria		Archetype code:
Building category:	Residential buildings – Single family houses		RES_SINGLE_ 1981-1990_F_LIG
Period of construction:	1981-1990		
Climatic zone:	F	Number of records:	280

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	2.9	0.2	2.7	2.8	3.1
	Heated gross floor area	$A_{H;g}$	m^2	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m^2	66.7	35.8	37.1	51.5	96.9
	Heated gross volume	$V_{H;g}$	m^3	256.3	133.3	149.0	207.2	349.0
	Heated net volume	$V_{H;n}$	m^3	173.5	82.4	104.6	155.7	248.9
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	21.6	5.1	18.8	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	17.4	10.1	5.3	23.7	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_F_LIG
Period of construction:	1981-1990		
Climatic zone:	F	Number of records: 280	

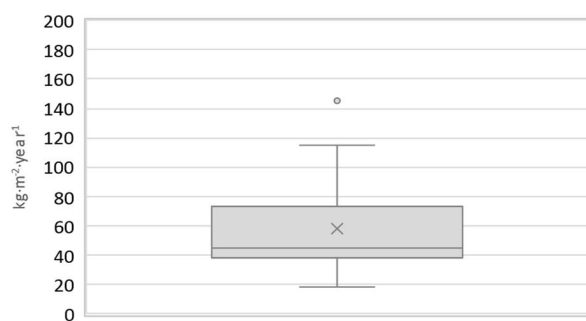### Additional data: other numerical variables that are not included in the archetype

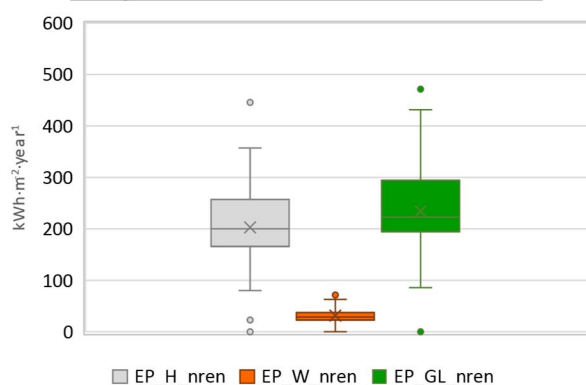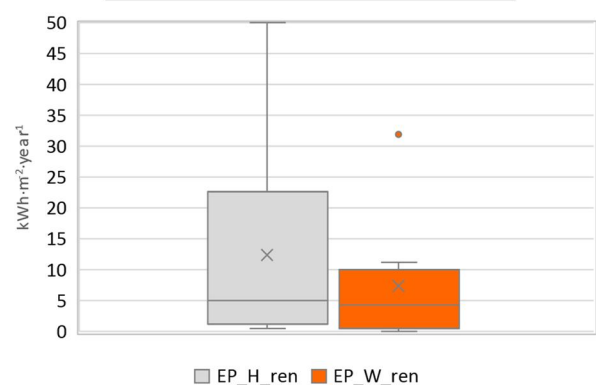#### DHW SUPPLY TEMPERATURE

SYSTEM POWER

☐ Heating ☐ DHW ☐ Cooling
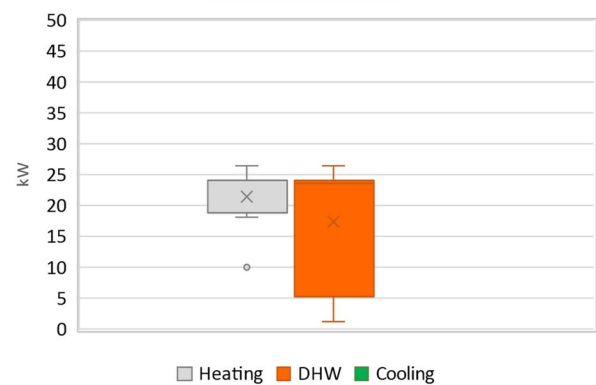
CO₂ EMISSION

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: 16; U-value of the wall: 16; U-value of the floor: 2; U-value of the windows: 17; Inter-storey height: 16; Heated net floor area: 17; Heated gross volume: 16; Heated net volume: 16; Total heating power: 9; DHW system power: 12; CO2 Emission: 14; EP_H_nren: 16; EP_W_nren: 16; EP_GL_nren: 16; EP_H_ren: 8; EP_W_ren: 11