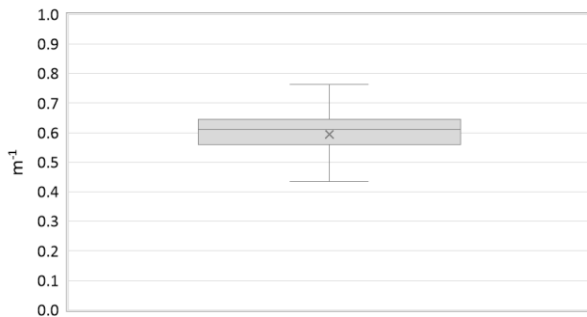


Region:	Tuscany						Archetype code: RES_APPBLOCK_ 1961-1970_D_TUS	
Building category:	Entire multi-family block							
Period of construction:	1961-1970							
Climatic zone:	D	Number of records:				35		
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: plaster (2 cm) - hollow brick (25 cm) - plaster (2 cm) (cod. MLP03). Roof slabs: reinforced brick-concrete slab (20-22 cm) - uninsulated concrete screed (-)							Data sources: Visual inspection (39%) National database (15%) Standards (15%) Others (31%) #	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	$n_f$	-	2.84	0.80	2.00	3.00	3.00
	Gross height	$H_g$	m	9.65	2.69	6.90	10.20	10.20
	Footprint area	$A_{\text{footprint}}$	m <sup>2</sup>	356.28	155.40	219.35	363.00	438.95
	Heated gross floor area	$A_{H,g}$	m <sup>2</sup>	944.59	467.12	582.78	742.64	1317.66
	Heated net floor area	$A_{H,n}$	m <sup>2</sup>	834.67	412.22	515.44	656.83	1165.40
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	3204.48	1575.99	1981.45	2562.11	4512.77
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	2496.67	1244.78	1546.32	1970.48	3496.21
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.59	0.08	0.56	0.61	0.65
	WWR – North orientation	$WWR_N$	-	0.15	0.08	0.09	0.13	0.20
	WWR – South orientation	$WWR_S$	-	0.14	0.08	0.09	0.14	0.18
	WWR – East orientation	$WWR_E$	-	0.18	0.08	0.14	0.18	0.24
	WWR – West orientation	$WWR_W$	-	0.18	0.08	0.12	0.18	0.23
	Window to useful floor area ratio	$A_{wi}/A_{\text{use}}$	-	0.20	0.04	0.17	0.19	0.22
ENVELOPE	Roof type	Reinforced brick-concrete slab: 100%.						
	U-value of the roof	$U_{fi,up}$	W/(m <sup>2</sup> ·K)	1.51	0.02	1.50	1.50	1.50
	External walls type	Hollow brick masonry: 63%; Hollow brick masonry, low insulation: 34%; Hollow brick masonry, high insulation: 3%.						
	U-value of the wall	$U_{wi}$	W/(m <sup>2</sup> ·K)	1.16	0.16	1.17	1.18	1.18
	Slab on ground floor type	Reinforced brick-concrete slab: 100%.						
	U-value of the floor	$U_{fi,lw}$	W/(m <sup>2</sup> ·K)	1.51	0.12	1.58	1.58	1.58
	Windows type	Unknown: 100%						
	U-value of the windows	$U_W$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
GAINS and VENTILATION	Shading system type	Roller blinds: 100%.						
	Occupancy density *	$O_C$	person/m <sup>2</sup>	UNI EN 16798-1 - Table A.19				
	Lighting power density	$W_L$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3				
	Equipment power density *	$W_A$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3				
	Type of ventilation	Natural: 100%						
	Air exchange rate *	$n$	h <sup>-1</sup>	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Autonomous: 86%; Centralized: 11%; Unknown: 3%.						
	Heating generator	Boiler (unknown type): 97%; Unknown: 3%.						
	Daily operating time of the heating system *	$t_H$	h	12.00	0.00	12.00	12.00	12.00
	Energy carrier	Natural gas: 100%.						
	Heating emission sub-system	Unknown: 100%						
	Cooling system type	Unknown: 64%; Air-cooled chiller: 24%; Absent: 12%.						
	Daily operating time of the cooling system	$t_C$	h	12.00	0.00	12.00	12.00	12.00
	Cooling emission sub-system	Multisplit: 100%						
	DHW system type	Autonomous, coupled with heating: 86%; Autonomous, detached from heating: 11%; Unknown: 3%.						
	DHW generator	Natural gas boiler: 86%; Unknown: 14%.						
# Measured data (13%), Local database (8%), Other (6%), Standards (4%). * These values are derived from UNI EN ISO Standards								

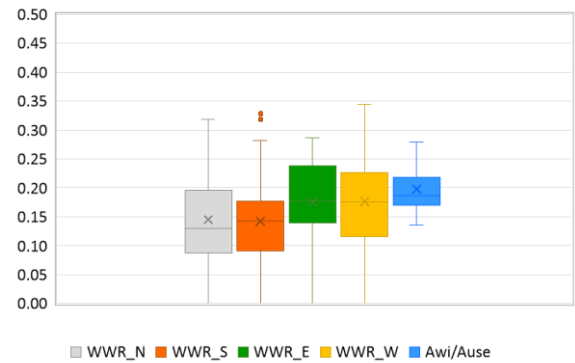
Region:	Tuscany	Archetype code: RES_APPBLOCK_ 1961-1970_D_TUS
Building category:	Entire multi-family block	
Period of construction:	1961-1970	
Climatic zone:	D	
Number of records:		35

### Numerical variables – GEOMETRY

**COMPACTNESS RATIO**

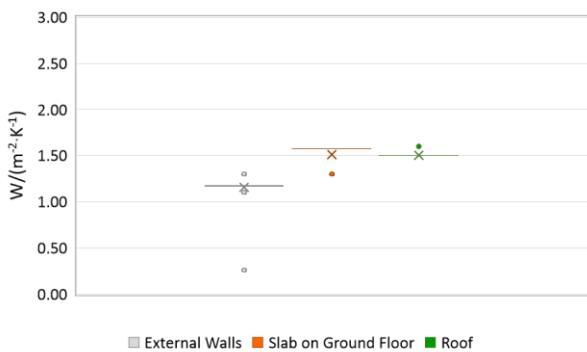


**WINDOWS TO WALL RATIO**



### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**

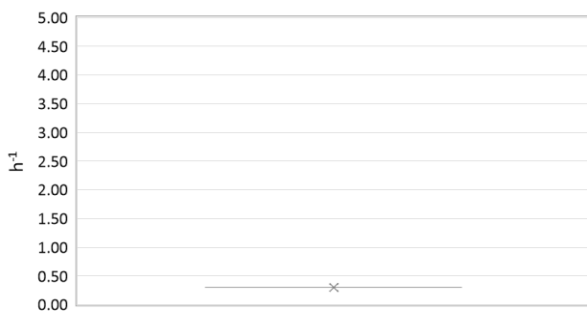


**WINDOWS U-VALUE**

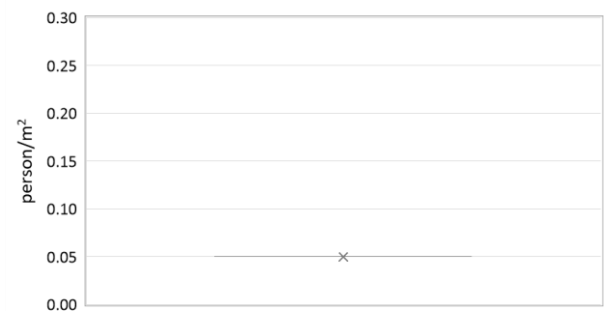


### Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

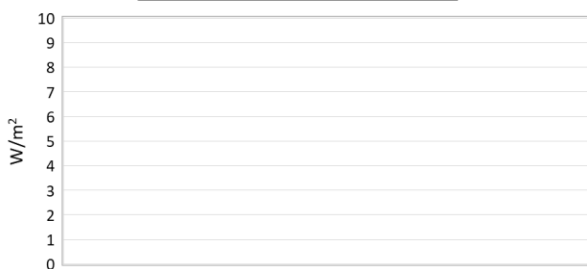
**AIR EXCHANGE RATE**



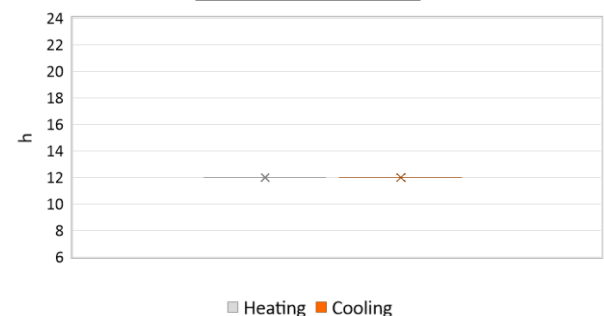
**OCCUPANCY DENSITY**



**INTERNAL GAINS POWER DENSITY**

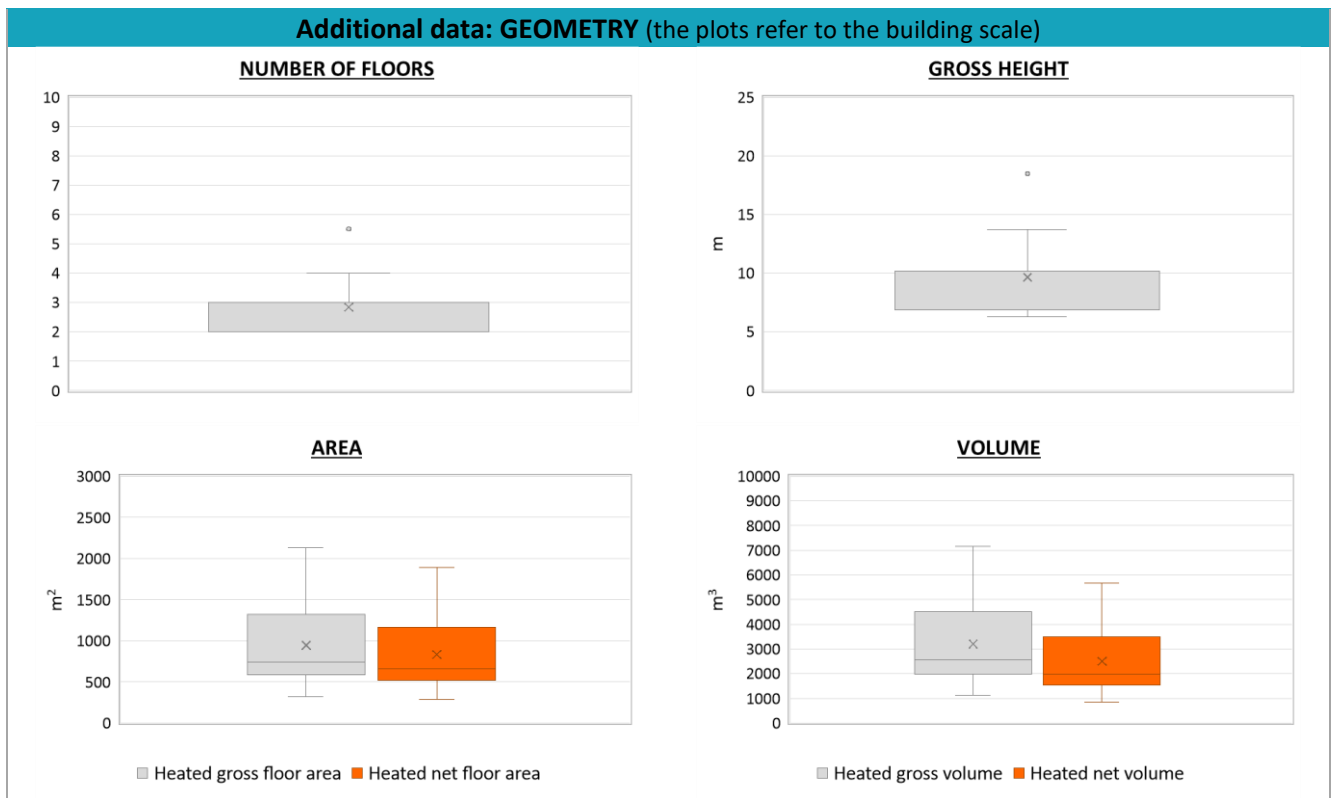


**DAILY OPERATING TIME**



Region:	Tuscany	Archetype code: RES_APPBLOCK_ 1961-1970_D_TUS
Building category:	Entire multi-family block	
Period of construction:	1961-1970	
Climatic zone:	D	
Number of records:		35

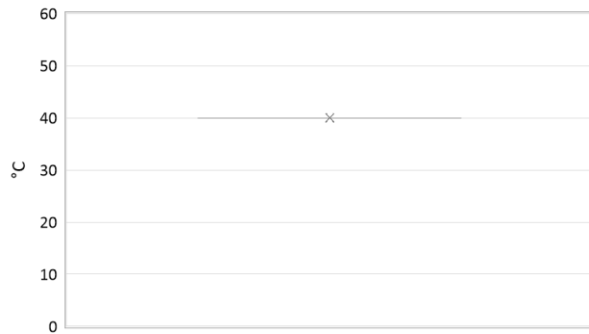
ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	$H_n$	m	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m <sup>2</sup>	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m <sup>2</sup>	-	-	-	-	-
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	-	-	-	-	-
THERMAL SYSTEMS	Heating efficiency or <i>COP</i>	$\eta_{H,gen}$ or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power *	$P_{H,gen}$	kW	-	-	-	-	-
	Cooling efficiency or <i>EER</i>	$\eta_{C,gen}$ or $EER_{C,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power *	$P_{C,gen}$	kW	-	-	-	-	-
	Temperature of DHW	$\theta_w$	°C	40.00	0.00	40.00	40.00	40.00
	DHW system power *	$P_{W,gen}$	kW	-	-	-	-	-
* These values refer to the apartment scale								



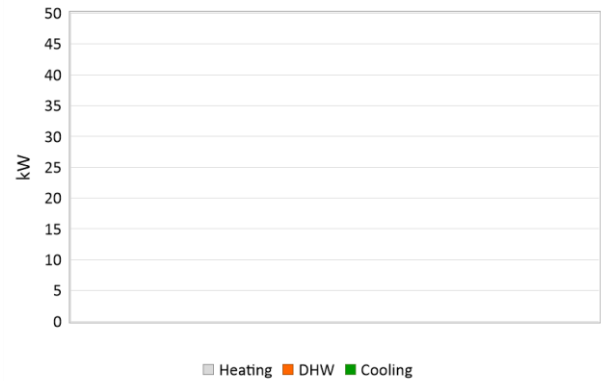
Region:	Tuscany	Archetype code: RES_APPBLOCK_ 1961-1970_D_TUS
Building category:	Entire multi-family block	
Period of construction:	1961-1970	
Climatic zone:	D	
Number of records:		35

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

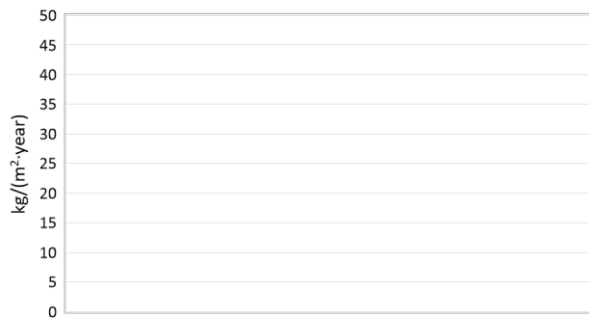
**DHW SUPPLY TEMPERATURE**



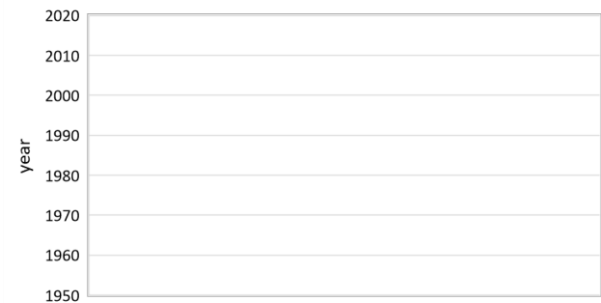
**SYSTEM POWER**



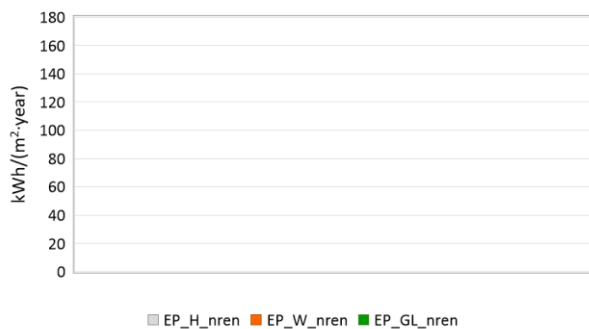
**CO<sub>2</sub> EMISSION**



**HEATING SYSTEM INSTALLATION YEAR**



**NON-RENEWABLE PRIMARY ENERGY USE**



**RENEWABLE PRIMARY ENERGY USE**

