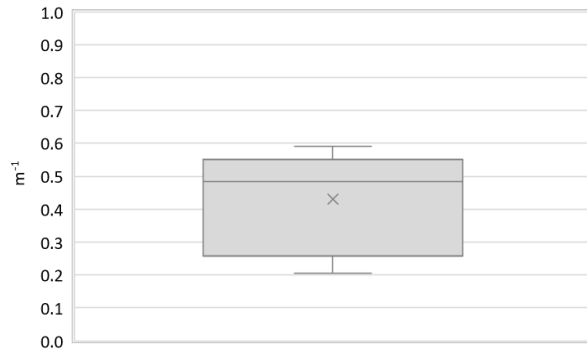


Region:	Calabria						Archetype code: RES_APPBLOCK_ 1971-1980_E_CAL	
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	1971-1980							
Climatic zone:	E	Number of records:				12		
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: double layer of hollow bricks (12 cm + 12 cm) with uninsulated air gap (cod. MCV01). Roof slabs: no data available							Data sources: Survey data (51%) Measured data (16%) Expert assumptions (13%) Others (20%) #	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	$n_f$	-	2.50	2.39	1.00	1.00	3.25
	Gross height	$H_g$	m	-	-	-	-	-
	Footprint area	$A_{\text{footprint}}$	m <sup>2</sup>	-	-	-	-	-
	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>	-	-	-	-	-
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.43	0.15	0.26	0.48	0.55
	WWR – North orientation	$WWR_N$	-	0.18	0.12	0.07	0.16	0.27
	WWR – South orientation	$WWR_S$	-	0.16	0.07	0.09	0.17	0.19
	WWR – East orientation	$WWR_E$	-	0.18	0.10	0.05	0.20	0.26
	WWR – West orientation	$WWR_W$	-	0.29	0.21	0.12	0.30	0.33
	Window to useful floor area ratio	$A_{wi}/A_{\text{use}}$	-	0.19	0.13	0.10	0.17	0.21
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fi,up}$	W/(m <sup>2</sup> ·K)	1.10	0.78	0.32	1.06	1.42
	External walls type	Hollow brick masonry: 75%, Solid brick masonry: 17%, Concrete wall: 8%						
	U-value of the wall	$U_{wl}$	W/(m <sup>2</sup> ·K)	0.89	0.30	0.70	0.90	1.14
	Slab on ground floor type	-						
	U-value of the floor	$U_{fi,lw}$	W/(m <sup>2</sup> ·K)	0.62	0.44	0.26	0.32	1.04
	Windows type	Double glazing, wooden frame: 33%, Single glazing, wooden frame: 25%, Double glazing, aluminum frame with thermal break: 17%, Double glazing, PVC frame: 17%, Single glazing, aluminum frame: 8%						
	U-value of the windows	$U_W$	W/(m <sup>2</sup> ·K)	3.02	1.09	2.41	2.90	3.63
GAINS and VENTILATION	Shading system type	Roller blinds: 84%, Shutter: 8%, Curtains: 8%						
	Occupancy density	$O_C$	person/m <sup>2</sup>	0.033	0.011	0.026	0.035	0.043
	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: 100%						
	Heating generator	Traditional Boiler: 42%, Fireplace: 33%, Condensing Boiler: 25%						
	Daily operating time of the heating system *	$t_H$	h	8.00	0.00	8.00	8.00	8.00
	Energy carrier	Natural Gas: 67%, Solid biomass: 33%						
	Heating emission sub-system	Radiators: 100%						
	Cooling system type	Absent: 100%						
	Daily operating time of the cooling system	$t_C$	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	-						
	DHW generator	-						
	# Standards (8%), Municipal database (8%), EPC database (4%). * These values were not available in the considered sources, and are thus derived from UNI EN Standards							

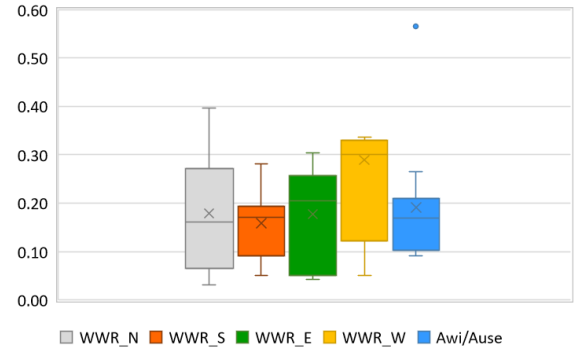
Region:	Calabria			Archetype code: RES_APPBLOCK_ 1971-1980_E_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1971-1980			
Climatic zone:	E	Number of records:	12	

### Numerical variables – GEOMETRY

**COMPACTNESS RATIO**

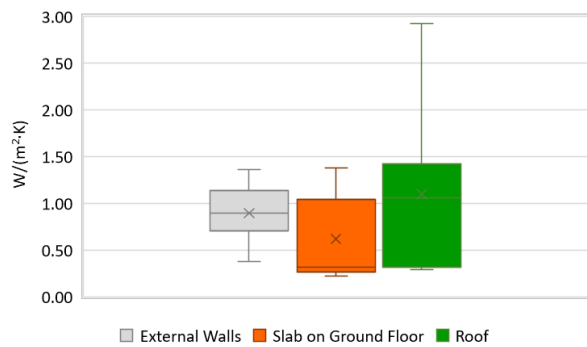


**WINDOWS TO WALL RATIO**

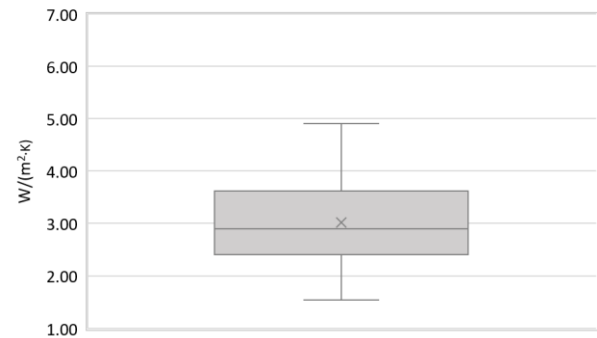


### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**



**WINDOWS U-VALUE**

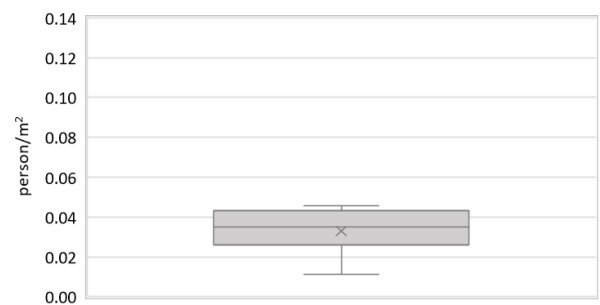


### Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

**AIR EXCHANGE RATE**



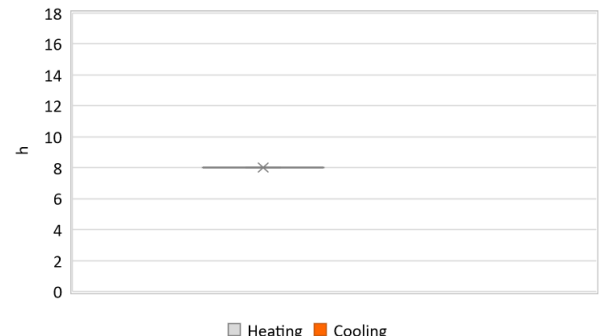
**OCCUPANCY DENSITY**



**INTERNAL GAINS POWER DENSITY**



**DAILY OPERATING TIME**

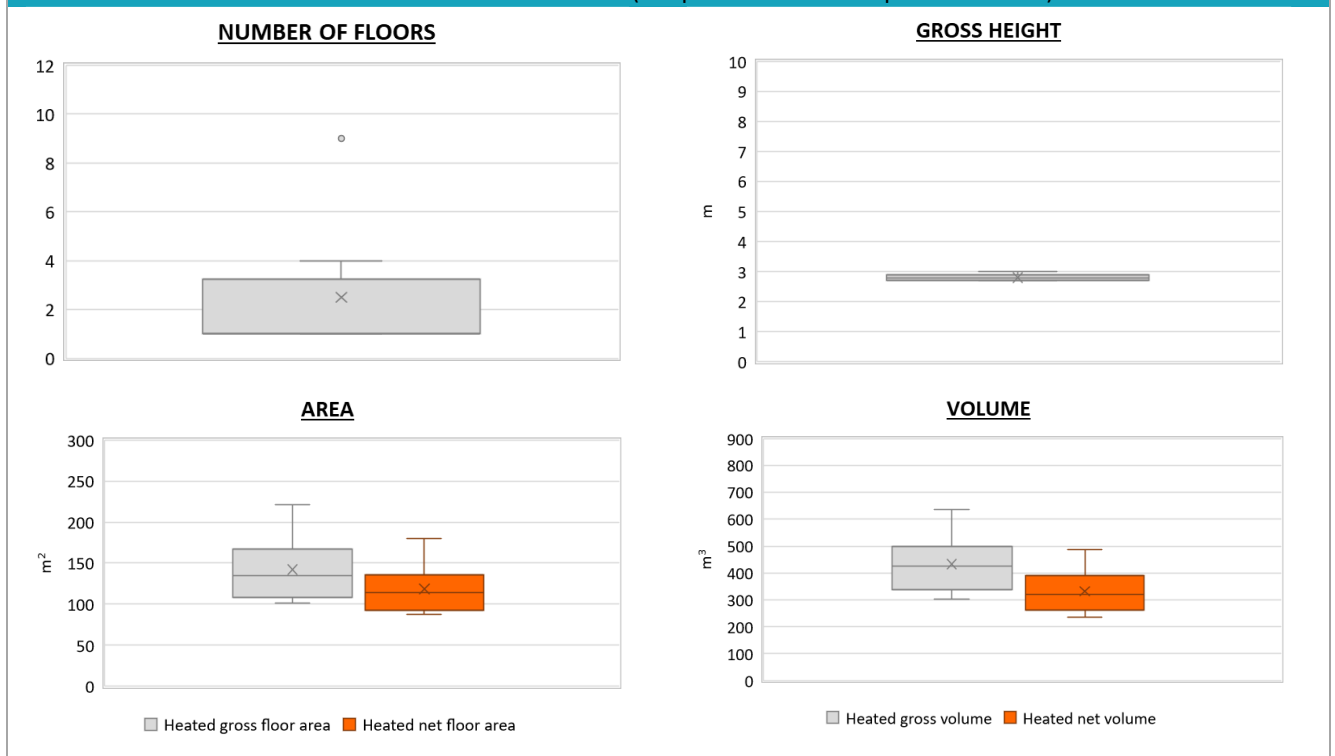


Region:	Calabria			Archetype code: RES_APPBLOCK_ 1971-1980_E_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1971-1980			
Climatic zone:	E	Number of records:	12	

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	2.81	0.12	2.70	2.80	2.90
	Heated gross floor area	$A_{H,g}$	m <sup>2</sup>	142.16	36.88	108.17	134.49	167.32
	Heated net floor area	$A_{H,n}$	m <sup>2</sup>	118.74	28.95	92.44	113.74	136.15
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	432.44	103.99	339.23	424.58	497.78
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	332.44	77.88	260.70	321.28	390.24
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	24.52	2.87	22.85	24.50	26.70
	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

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



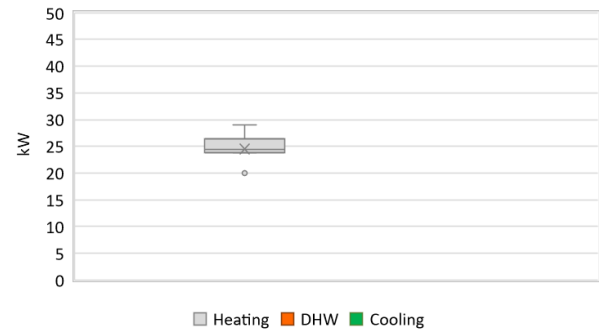
Region:	Calabria			Archetype code: RES_APPBLOCK_ 1971-1980_E_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1971-1980			
Climatic zone:	E	Number of records:	12	

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

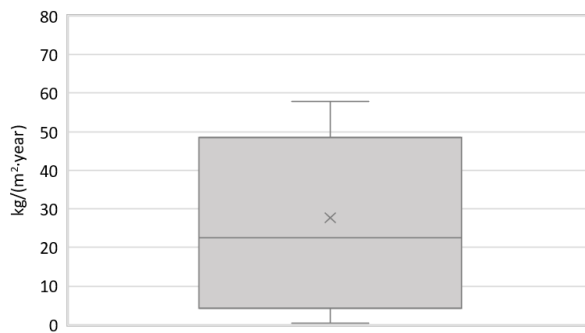
**DHW SUPPLY TEMPERATURE**



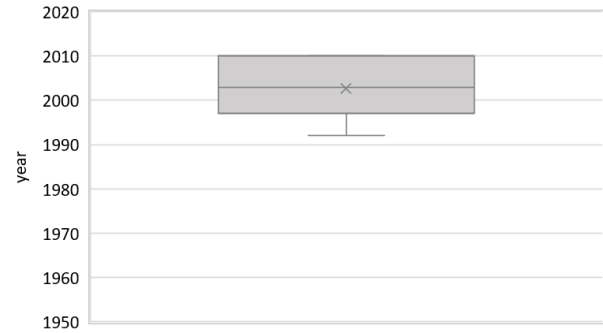
**SYSTEM POWER**



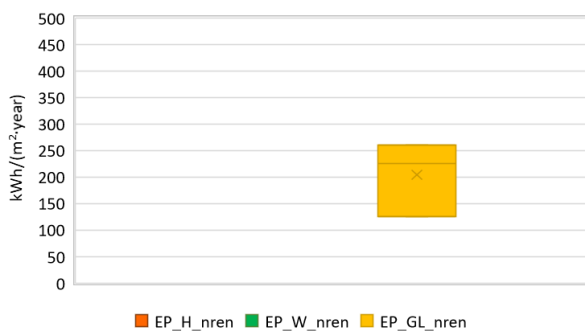
**CO<sub>2</sub> EMISSION**



**HEATING SYSTEM INSTALLATION YEAR**



**NON-RENEWABLE PRIMARY ENERGY USE**



**RENEWABLE PRIMARY ENERGY USE**

