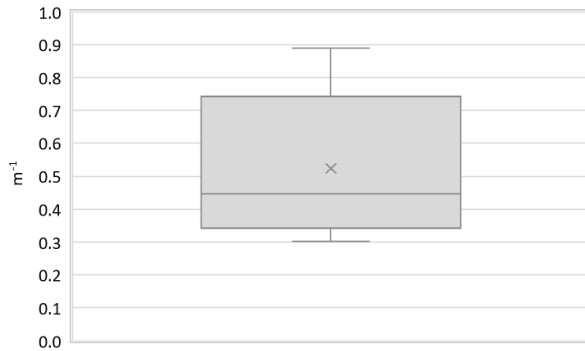


Region:	Calabria					Archetype code: RES_APPBLOCK_ 1981-1990_B_CAL		
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	1981-1990							
Climatic zone:	B	Number of records:			6			
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: double layer of hollow bricks (12 cm + 25 cm) with uninsulated air gap (cod. MCV01). Roof slabs: no data available						Data sources: Survey data (52%) Measured data (16%) Expert assumptions (12%) 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	-	1.59	0.48	1.00	1.00	1.00
	Gross height	H_g	m	-	-	-	-	-
	Footprint area	$A_{\text{footprint}}$	m ²	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m ²	-	-	-	-	-
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m ³	-	-	-	-	-
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.52	0.23	0.34	0.45	0.74
	WWR – North orientation	WWR_N	-	0.16	0.10	0.05	0.18	0.24
	WWR – South orientation	WWR_S	-	0.24	0.13	0.11	0.30	0.32
	WWR – East orientation	WWR_E	-	0.18	0.11	0.10	0.16	0.30
	WWR – West orientation	WWR_W	-	0.19	0.08	0.13	0.21	0.24
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.14	0.03	0.11	0.12	0.17
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fi,up}$	W/(m ² ·K)	0.82	0.39	0.46	0.78	1.19
	External walls type	Hollow brick masonry: 50%, Solid brick masonry: 50%						
	U-value of the wall	U_{wi}	W/(m ² ·K)	0.63	0.31	0.31	0.64	0.89
	Slab on ground floor type	-						
	U-value of the floor	$U_{fi,lw}$	W/(m ² ·K)	1.06	0.63	0.46	1.05	1.68
	Windows type	Double glazing, wooden frame: 33%, Double glazing, aluminum frame, no thermal break: 17%, Double glazing, PVC frame: 17%, Single glazing, wooden frame: 17%, Single glazing, PVC frame: 16%						
	U-value of the windows	U_W	W/(m ² ·K)	4.75	1.48	3.75	4.75	5.81
GAINS and VENTILATION	Shading system type	Roller blinds: 50%, Shutter: 33%, Curtains: 17%						
	Occupancy density	O_C	person/m ²	0.036	0.010	0.026	0.039	0.044
	Lighting power density *	W_L	W/m ²	UNI EN 16798-1 - A.8.3				
	Equipment power density *	W_A	W/m ²	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	Autonomous: 100%						
	Heating generator	Traditional Boiler: 83%, Air-source heat pump: 17%						
	Daily operating time of the heating system *	t_H	h	8.00	0.00	8.00	8.00	8.00
	Energy carrier	Natural Gas: 50%, Gas Oil: 17%, LPG: 17%, Electricity: 16%						
	Heating emission sub-system	Radiators: 83%, Fan Coil: 17%						
	Cooling system type	Absent: 83%, Air-cooled chiller: 17%						
	Daily operating time of the cooling system *	t_C	h	8.00	0.00	8.00	8.00	8.00
	Cooling emission sub-system	Fan Coil: 100%						
	DHW system type	Autonomous – coupled with heating: 83%, Autonomous – detached from heating: 17%						
	DHW generator	Natural gas boiler: 83%, Electric boiler: 17%						
	# 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							

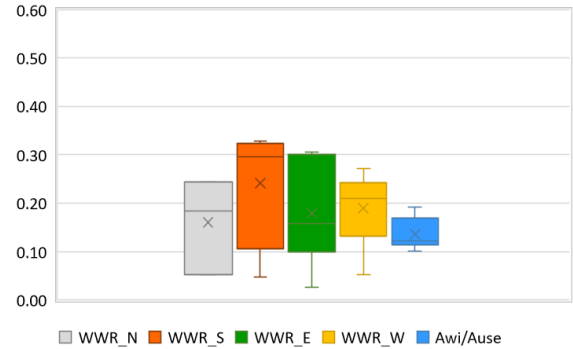
Region:	Calabria	Archetype code: RES_APPBLOCK_ 1981-1990_B_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	1981-1990	
Climatic zone:	B	
Number of records:		6

Numerical variables – GEOMETRY

COMPACTNESS RATIO

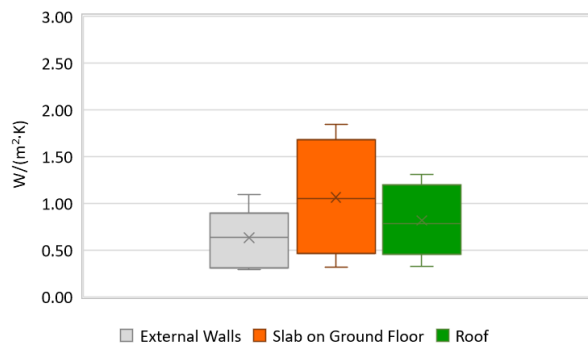


WINDOWS TO WALL RATIO

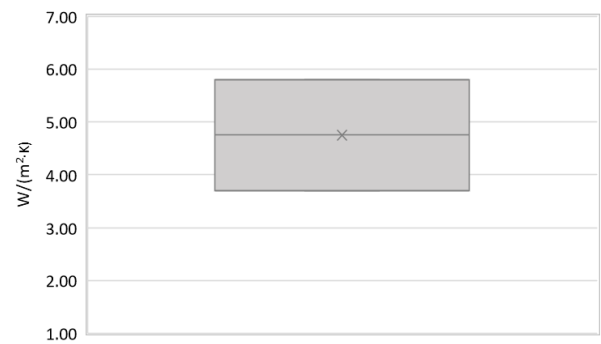


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

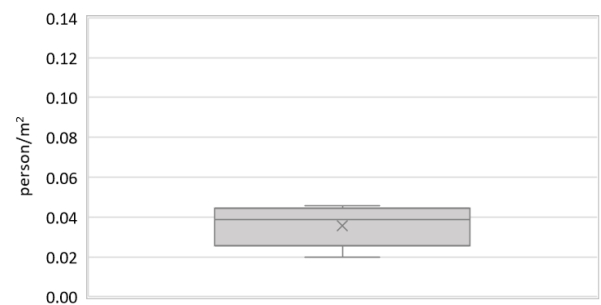


Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

AIR EXCHANGE RATE



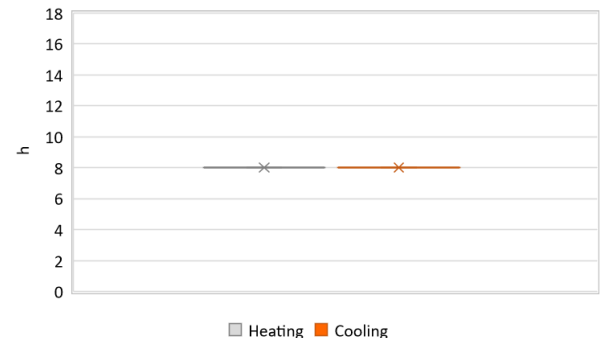
OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



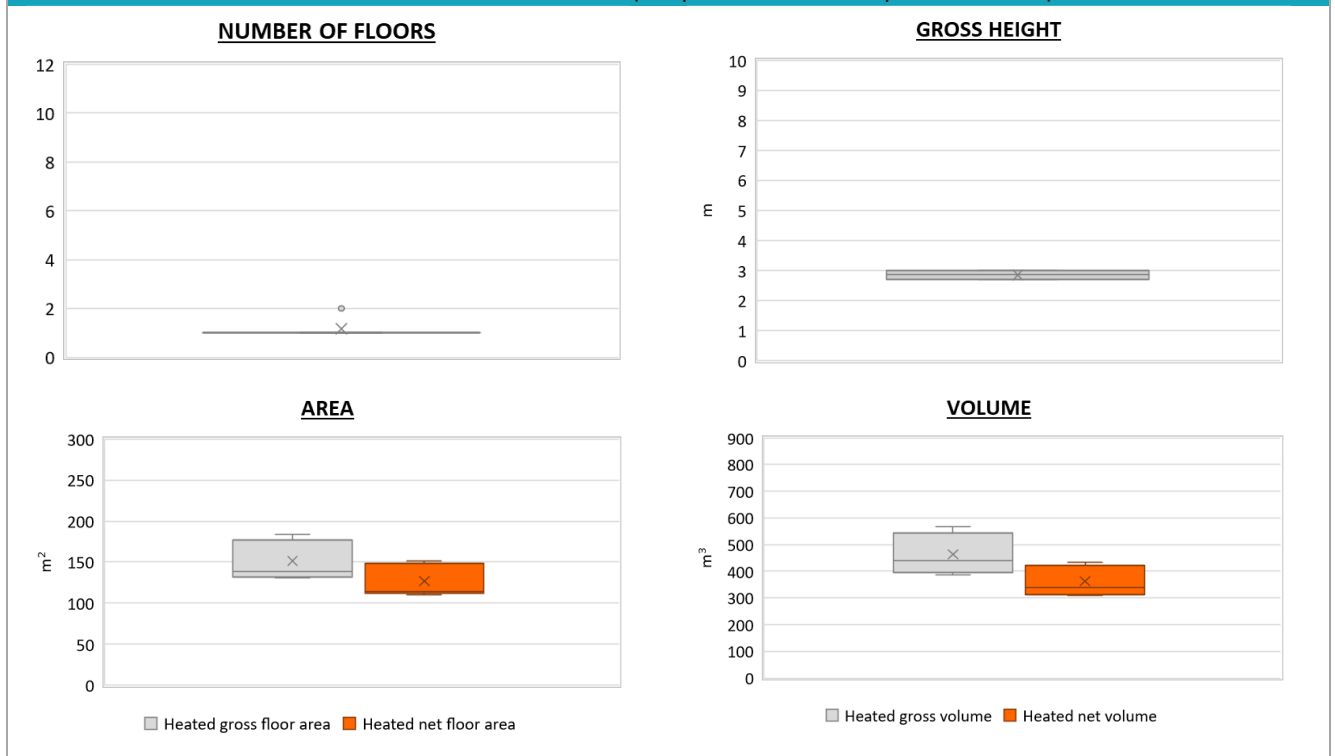
DAILY OPERATING TIME



Region:	Calabria			Archetype code: RES_APPBLOCK_ 1981-1990_B_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1981-1990			
Climatic zone:	B	Number of records:	6	

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	2.86	0.14	2.70	2.88	3.00
	Heated gross floor area	$A_{H,g}$	m ²	151.53	24.26	132.08	138.72	177.39
	Heated net floor area	$A_{H,n}$	m ²	126.93	19.78	111.70	114.50	148.37
	Heated gross volume	$V_{H,g}$	m ³	463.83	76.36	396.63	440.57	542.66
	Heated net volume	$V_{H,n}$	m ³	362.60	56.38	314.08	340.20	422.34
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	29.22	5.28	23.65	31.10	33.85
	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	θ_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)



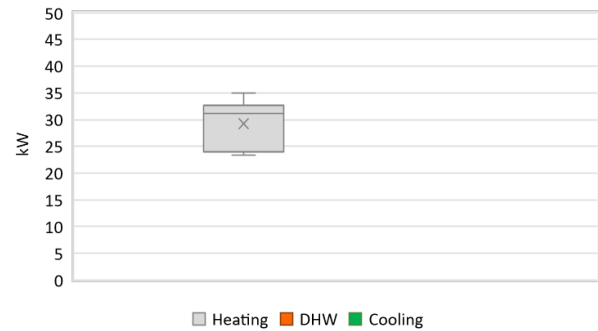
Region:	Calabria	Archetype code: RES_APPBLOCK_ 1981-1990_B_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	1981-1990	
Climatic zone:	B	
Number of records:		6

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

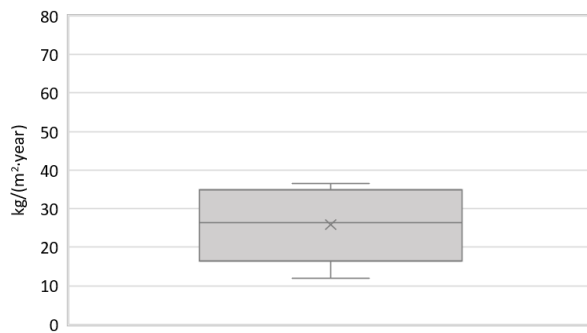
DHW SUPPLY TEMPERATURE



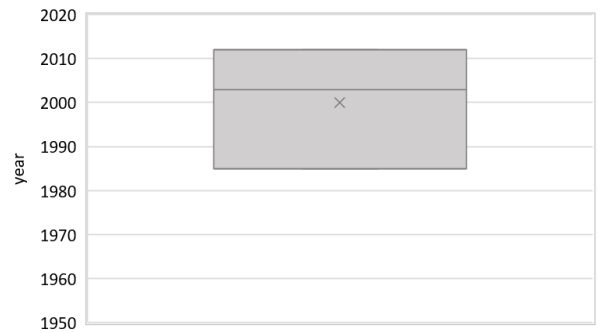
SYSTEM POWER



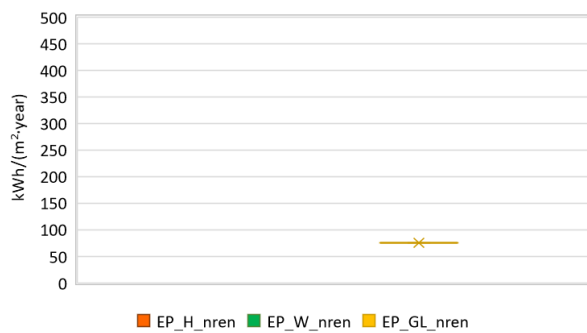
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

