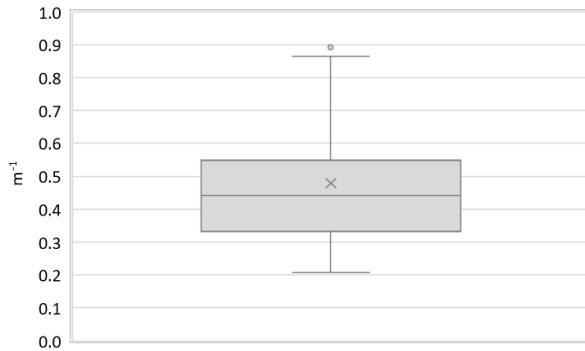


Region:	Calabria					Archetype code: RES_APPBLOCK_ 1981-1990_D_CAL		
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	1981-1990							
Climatic zone:	D	Number of records:			43			
Description (the codes associated with walls and slabs refer to 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 (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	-	2.14	1.59	1.00	2.00	3.00
	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	0.48	0.20	0.33	0.44	0.55
	WWR – North orientation	WWR_N	-	0.18	0.10	0.10	0.17	0.23
	WWR – South orientation	WWR_S	-	0.19	0.11	0.11	0.19	0.25
	WWR – East orientation	WWR_E	-	0.23	0.20	0.09	0.16	0.30
	WWR – West orientation	WWR_W	-	0.24	0.13	0.13	0.22	0.31
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.15	0.06	0.11	0.15	0.17
	ENVELOPE	Roof type	-					
U-value of the roof		$U_{f,up}$	W/(m ² ·K)	1.01	0.51	0.47	1.08	1.40
External walls type		Hollow brick masonry: 91%, Solid brick masonry: 9%						
U-value of the wall		U_{wl}	W/(m ² ·K)	0.84	0.37	0.55	0.77	1.10
Slab on ground floor type		-						
U-value of the floor		$U_{f,lw}$	W/(m ² ·K)	0.98	0.66	0.35	0.77	1.43
Windows type		Double glazing, wooden frame: 33%, Single glazing, wooden frame: 23%, Double glazing, aluminum frame, no thermal break: 12%, Double glazing, PVC frame: 12%, Single glazing, aluminum frame: 11%, Double glazing, aluminum frame with thermal break: 9%						
U-value of the windows		U_W	W/(m ² ·K)	3.80	1.40	2.70	3.63	4.90
GAINS and VENTILATION	Shading system type	Roller blinds: 58%, Shutter: 33%, Curtains: 2%, Unknown: 7%						
	Occupancy density	O_C	person/m ²	0.034	0.014	0.025	0.032	0.042
	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%						
THERMAL SYSTEMS	Air exchange rate *	n	h ⁻¹	0.30	0.00	0.30	0.30	0.30
	Heating system type	Autonomous: 100%						
	Heating generator	Traditional Boiler: 81%, Fireplace: 10%, Condensing Boiler: 9%						
	Daily operating time of the heating system *	t_H	h	8.00	0.00	8.00	8.00	8.00
	Energy carrier	Natural Gas: 72%, LPG: 12%, Solid biomass: 9%, Electricity: 7%						
	Heating emission sub-system	Radiators: 100%						
	Cooling system type	Absent: 97%, Air-cooled chiller: 3%						
	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	-						
	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							

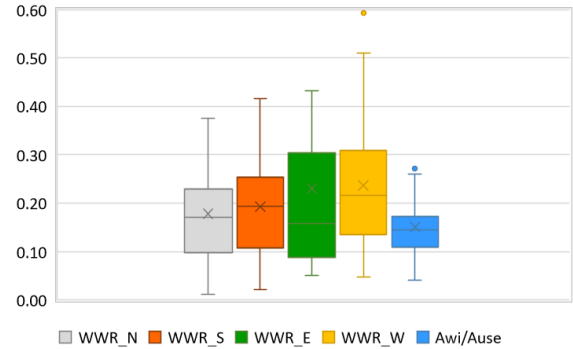
Region:	Calabria	Archetype code: RES_APPBLOCK_ 1981-1990_D_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	1981-1990	
Climatic zone:	D	
Number of records:		43

Numerical variables – GEOMETRY

COMPACTNESS RATIO

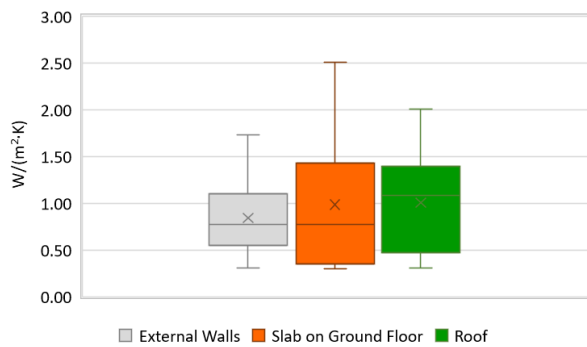


WINDOWS TO WALL RATIO

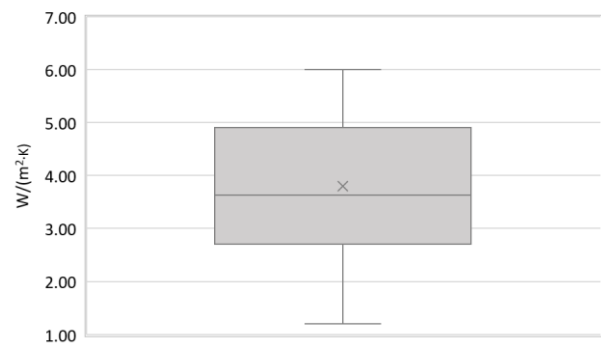


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

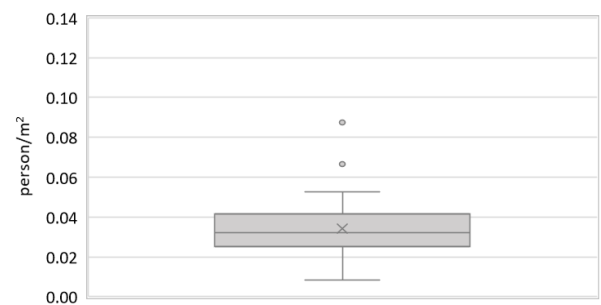


Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

AIR EXCHANGE RATE



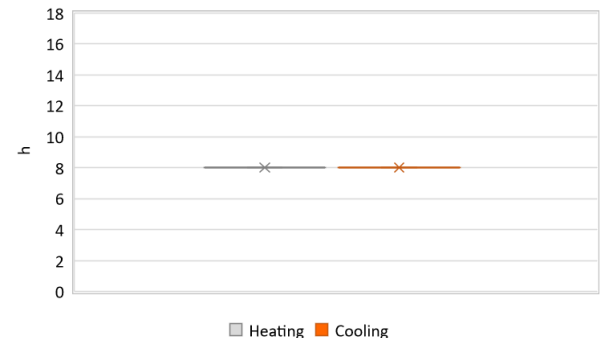
OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME

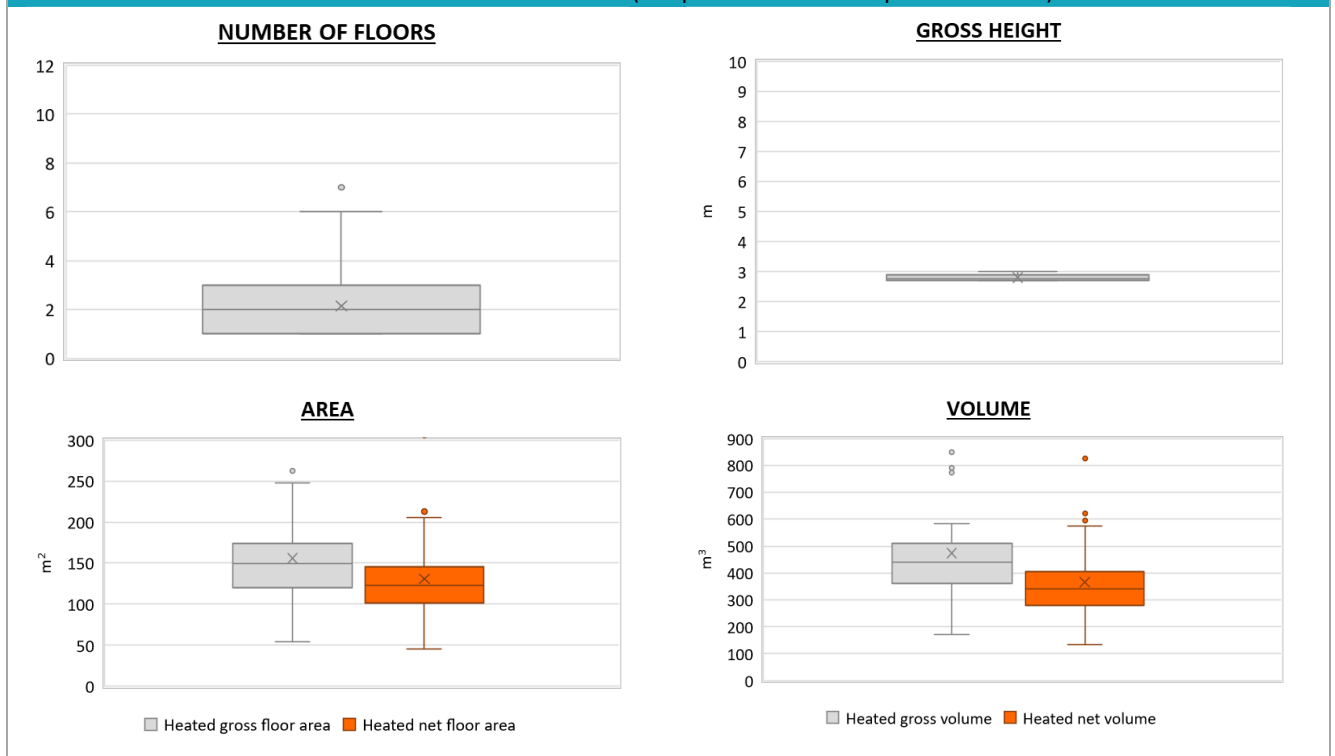


Region:	Calabria			Archetype code: RES_APPBLOCK_ 1981-1990_D_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1981-1990			
Climatic zone:	D	Number of records:	43	

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	2.80	0.12	2.70	2.75	2.90
	Heated gross floor area	$A_{H,g}$	m ²	155.75	57.92	120.01	149.45	173.62
	Heated net floor area	$A_{H,n}$	m ²	130.98	48.98	101.52	123.39	145.76
	Heated gross volume	$V_{H,g}$	m ³	473.50	177.73	362.82	441.47	511.02
	Heated net volume	$V_{H,n}$	m ³	365.69	136.97	279.46	340.56	403.90
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	26.56	4.51	24.00	25.00	27.65
	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)



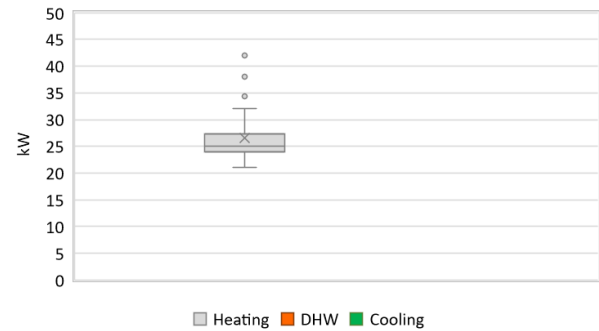
Region:	Calabria	Archetype code: RES_APPBLOCK_ 1981-1990_D_CAL
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	1981-1990	
Climatic zone:	D	
Number of records:		43

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

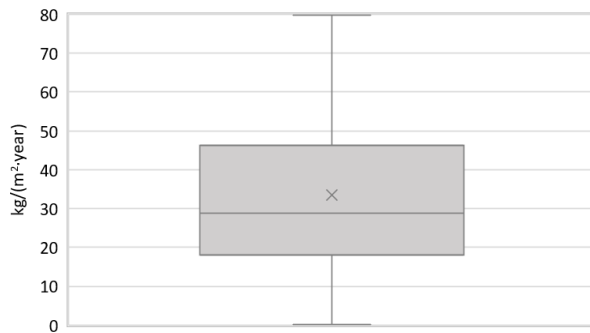
DHW SUPPLY TEMPERATURE



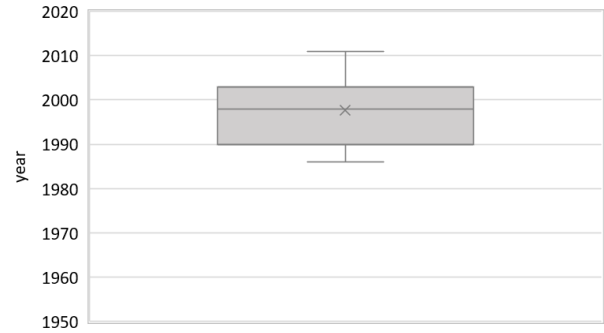
SYSTEM POWER



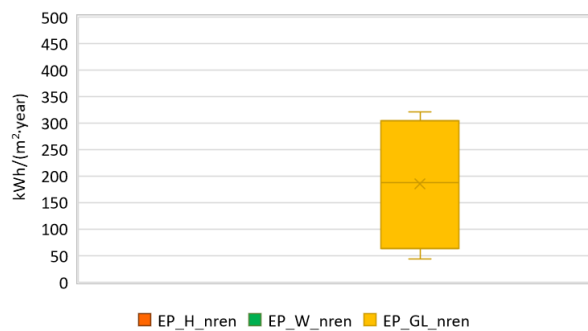
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

