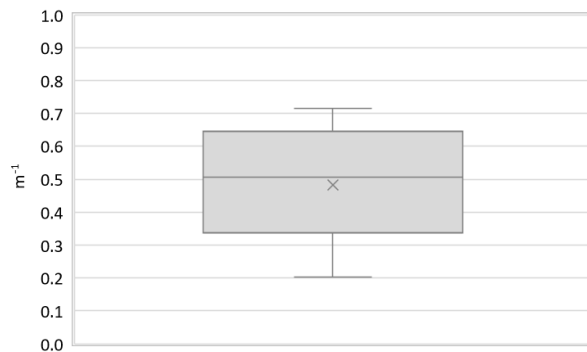


| | | | | | | | | |
|--|--|--|-----------------------|------------------------|--------------------|---|--------------|---------------------|
| Region: | Calabria | | | | | Archetype code: RES_APPBLOCK_ 1961-1970_B_CAL | | |
| Building category: | Residential buildings – Apartments (in multifamily blocks) | | | | | | | |
| Period of construction: | 1961-1970 | | | | | | | |
| Climatic zone: | B | Number of records: | | | 19 | | | |
| 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 (12%) Expert assumptions (11%) Others (25%) # | | |
| | Data | Symbol | Unit of measure | Mean value | Standard deviation | Q1 (first quartile) | Median value | Q3 (third quartile) |
| BUILDING GEOMETRY | Number of floors | n_f | - | 1.63 | 1.07 | 1.00 | 1.00 | 2.00 |
| | 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 | 0.17 | 0.34 | 0.51 | 0.65 |
| | WWR – North orientation | WWR_N | - | 0.12 | 0.09 | 0.06 | 0.09 | 0.20 |
| | WWR – South orientation | WWR_S | - | 0.22 | 0.03 | 0.18 | 0.23 | 0.24 |
| | WWR – East orientation | WWR_E | - | 0.19 | 0.08 | 0.13 | 0.17 | 0.28 |
| | WWR – West orientation | WWR_W | - | 0.21 | 0.08 | 0.13 | 0.19 | 0.31 |
| | Window to useful floor area ratio | A_{wi}/A_{use} | - | 0.15 | 0.06 | 0.11 | 0.14 | 0.18 |
| | ENVELOPE | Roof type | - | | | | | |
| U-value of the roof | | $U_{f,\text{up}}$ | W/(m ² ·K) | 0.90 | 0.38 | 0.57 | 0.77 | 1.13 |
| External walls type | | Hollow brick masonry: 68%, Solid brick masonry: 11%, Concrete wall: 11%, Masonry with local stones: 5%, Unknown: 5% | | | | | | |
| U-value of the wall | | U_{wl} | W/(m ² ·K) | 0.97 | 0.38 | 0.51 | 1.06 | 1.20 |
| Slab on ground floor type | | - | | | | | | |
| U-value of the floor | | $U_{f,lw}$ | W/(m ² ·K) | 0.79 | 0.38 | 0.50 | 0.73 | 1.18 |
| Windows type | | Double glazing, aluminum frame with thermal break: 23%, Double glazing, aluminum frame, no thermal break: 18%, Double glazing, wooden frame: 18%, Single glazing, aluminum frame: 18%, Double glazing, PVC frame: 12%, Single glazing, wooden frame: 11% | | | | | | |
| U-value of the windows | | U_W | W/(m ² ·K) | 3.49 | 1.07 | 2.80 | 2.95 | 4.90 |
| Shading system type | | Shutter: 47%, Roller blinds: 41%, Curtains: 6%, Unknown: 6% | | | | | | |
| GAINS and VENTILATION | Occupancy density | O_C | person/m ² | 0.036 | 0.017 | 0.024 | 0.034 | 0.050 |
| | Lighting power density | W_L | W/m ² | 5.61 | 2.94 | 3.55 | 5.05 | 8.89 |
| | 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: 89%, Centralized: 11% | | | | | | |
| | Heating generator | Traditional Boiler: 47%, Fireplace: 21%, Condensing Boiler: 16%, Air source heat pump: 5%, Unknown: 11% | | | | | | |
| | Daily operating time of the heating system | t_H | h | 7.14 | 4.05 | 4.00 | 6.00 | 9.00 |
| | Energy carrier | Natural Gas: 42%, Solid Biomass: 21%, Electricity: 16%, LPG: 11%, Unknown: 10% | | | | | | |
| | Heating emission sub-system | Radiators: 77%, Fan coil: 6%, Unknown: 17% | | | | | | |
| | Cooling system type | Air-cooled chiller: 53%, Absent: 42%, Water-cooled chiller: 5% | | | | | | |
| | 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 - detached from heating: 100% | | | | | | |
| | DHW generator | Electric boiler: 100% | | | | | | |
| # Standards (10%), EPC databases (9%), Municipal database (6%). | | | | | | | | |
| * These values were not available in the considered sources, and are thus derived from UNI EN Standards | | | | | | | | |

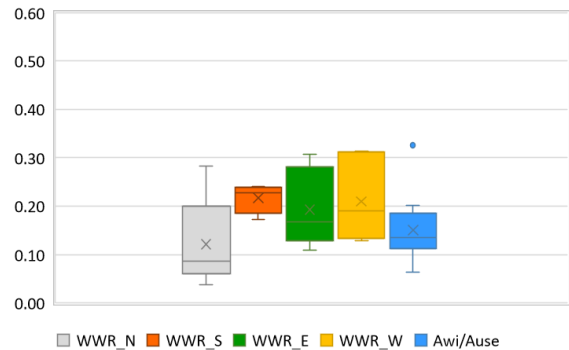
| | | |
|--------------------------------|--|--|
| Region: | Calabria | Archetype code: RES_APPBLOCK_ 1961-1970_B_CAL |
| Building category: | Residential buildings – Apartments (in multifamily blocks) | |
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Numerical variables – GEOMETRY

COMPACTNESS RATIO

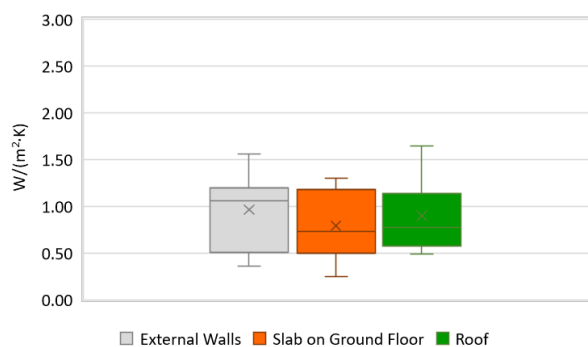


WINDOWS TO WALL RATIO

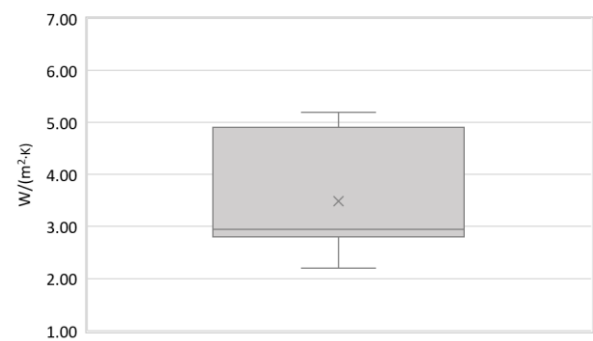


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

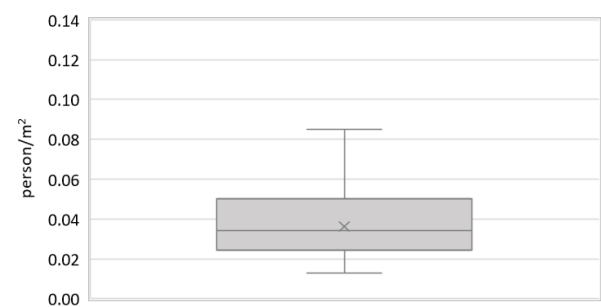


Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

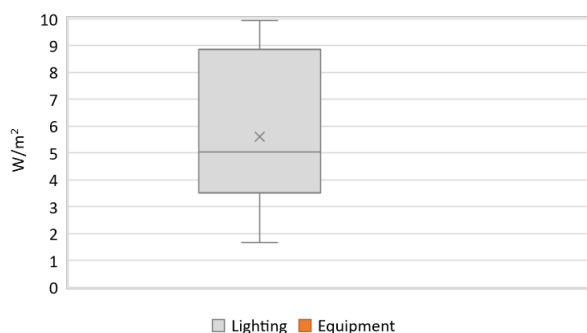
AIR EXCHANGE RATE



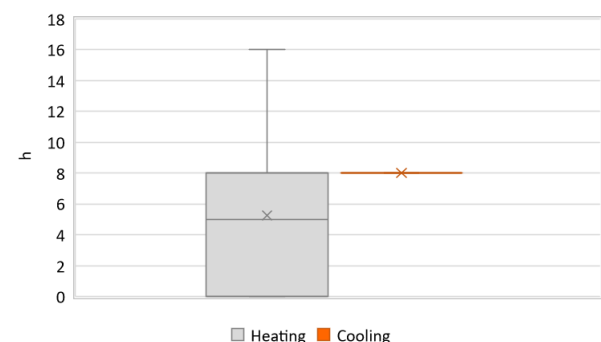
OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME



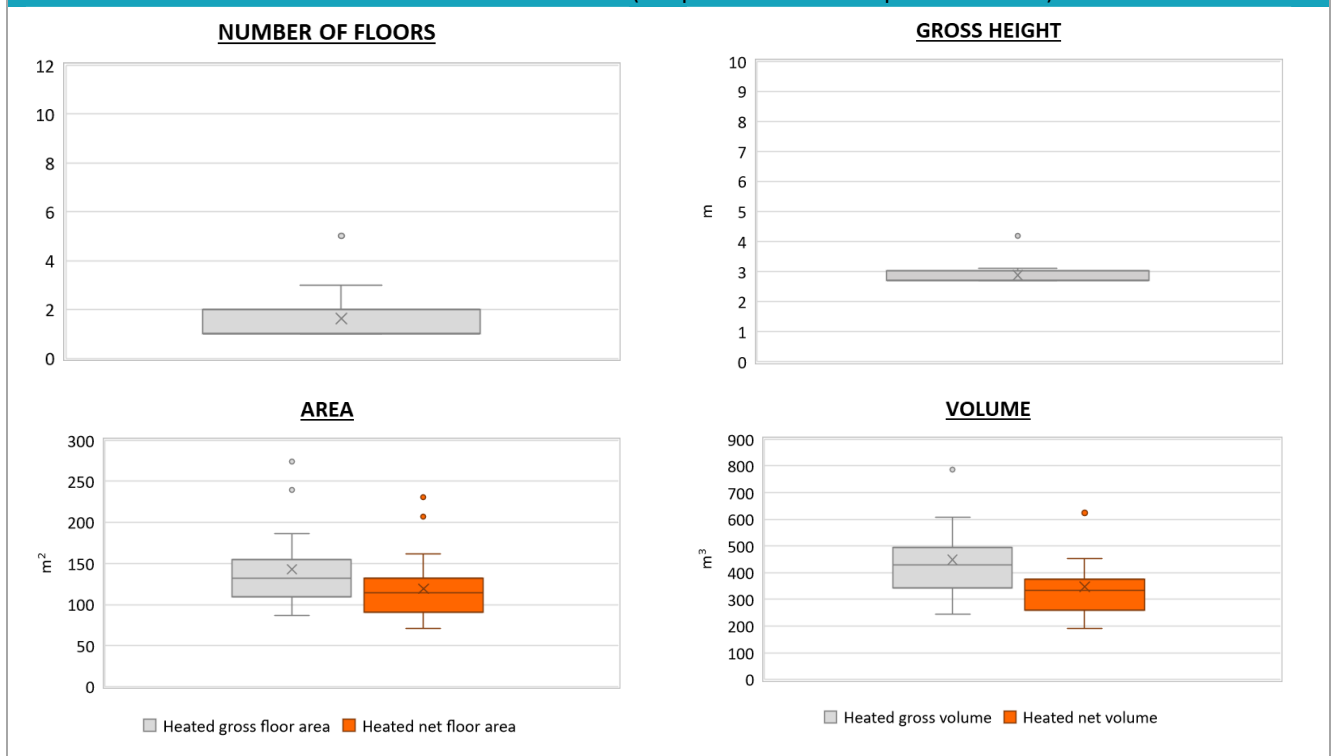
The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.

| | | |
|-------------------------|--|---|
| Region: | Calabria | Archetype code: RES_APPBLOCK_ 1961-1970_B_CAL |
| Building category: | Residential buildings – Apartments (in multifamily blocks) | |
| Period of construction: | 1961-1970 | |
| Climatic zone: | B | |
| Number of records: | | 19 |

| 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 | 2.89 | 0.37 | 2.70 | 2.70 | 3.03 |
| | Heated gross floor area | $A_{H,g}$ | m ² | 142.75 | 48.24 | 109.11 | 132.34 | 155.16 |
| | Heated net floor area | $A_{H,n}$ | m ² | 119.53 | 42.02 | 90.51 | 113.95 | 132.06 |
| | Heated gross volume | $V_{H,g}$ | m ³ | 448.59 | 155.13 | 341.68 | 428.26 | 494.16 |
| | Heated net volume | $V_{H,n}$ | m ³ | 347.67 | 123.54 | 259.90 | 334.80 | 375.52 |
| 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 | 20.91 | 8.65 | 19.25 | 24.00 | 25.30 |
| | 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 | 1.50 | 0.00 | 1.50 | 1.50 | 1.50 |

* These values refer to the apartment scale

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



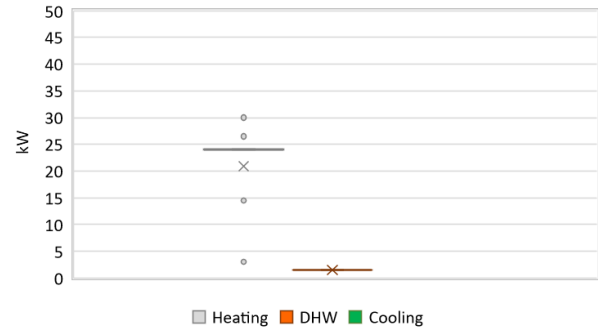
| | | |
|--------------------------------|--|--|
| Region: | Calabria | Archetype code: RES_APPBLOCK_ 1961-1970_B_CAL |
| Building category: | Residential buildings – Apartments (in multifamily blocks) | |
| Period of construction: | 1961-1970 | |
| Climatic zone: | B | |
| Number of records: | | 19 |

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

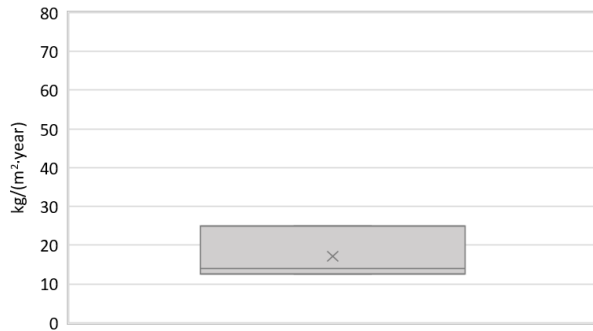
DHW SUPPLY TEMPERATURE



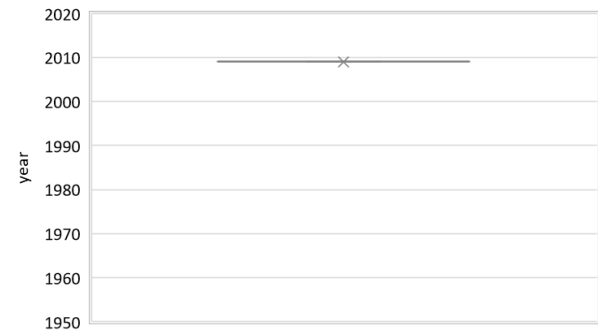
SYSTEM POWER



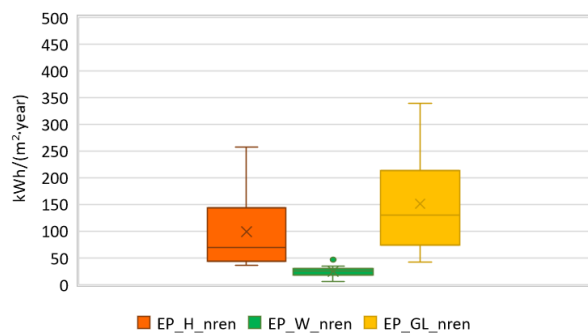
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

