

| Region: Calabria                  |   | Calabria  |  |  |              |                |                    | Archetype code:  |           |  |  |
|-----------------------------------|---|---|--|--|--------------|----------------|--------------------|--|-----------|--|--|
| Building category: Residential bu |   | uildings – Ap   | partments (in r  | RES_APPBLOCK_  |              |                |                    |  |           |  |  |
| Period of construction: 1971-1980 |   |   |  |  | <u> </u>     |                | 1971-1980_D_CAL    |  |           |  |  |
| Climatic zone: D                  |   | Number of records: 31                                 |  |  |              |                |                    |  |           |  |  |
|                                   |   | ciated with walls                                     | s and slabs re   | fer to the struct  |              |                |                    | Data s   | ources:   |  |  |
| •                                 |   |   | and slabs refer to the structures described in UNI/TR 11552:2014):<br>cks (12 cm + 12 cm) with uninsulated air gap (cod. MCV01).   |  |              |                |                    | Survey data (52%)<br>Measured data (16%)<br>Expert assumptions (12%)<br>Others (20%) # |           |  |  |
|                                   | Data  |   | Symbol   | Unit of  | Mean         | Standard       | Q1 (first          | Median   | Q3 (third |  |  |
|                                   |   |   |  | measure  | value        | deviation      | quartile)          | value  | quartile) |  |  |
|                                   | Number of floor   | rs  | n <sub>f</sub>   | -  | 2.67         | 1.42           | 2.00               | 2.50   | 3.00      |  |  |
|                                   | Gross height  |   | Hg   | m  | -            | -              | -                  | -  | -         |  |  |
|                                   | Footprint area  |   | A <sub>footprint</sub>   | m <sup>2</sup>   | -            | -              | -                  | -  | -         |  |  |
| ≿                                 | Heated gross floor area   |   | A <sub>H;g</sub>   | m <sup>2</sup>   | -            | -              | -                  | -  | -         |  |  |
| E.                                | Heated net floor area   |   | A <sub>H;n</sub>   | m <sup>2</sup>   | -            | -              | -                  | -  | -         |  |  |
| NO                                | Heated gross volume   |   | V <sub>H;g</sub>   | m <sup>3</sup>   | -            | -              | -                  | -  | -         |  |  |
| GE                                | Heated net volume   |   | V <sub>H;n</sub>   | m <sup>3</sup>   | -            | -              | -                  | -  | -         |  |  |
| BUILDING GEOMETRY                 | Compactness ra  | tio   | $A_{\rm env}/V_{\rm H;g}$  | m <sup>-1</sup>  | 0.46         | 0.18           | 0.30               | 0.47   | 0.61      |  |  |
|                                   | WWR – North o   | rientation  | WWR <sub>N</sub>   | -  | 0.11         | 0.07           | 0.05               | 0.10   | 0.16      |  |  |
| Ĩ                                 | WWR – South orientation   |   | WWRs   | -  | 0.15         | 0.09           | 0.07               | 0.17   | 0.24      |  |  |
| -                                 | WWR – East orientation  |   | WWR <sub>E</sub>   | -  | 0.16         | 0.14           | 0.04               | 0.13   | 0.23      |  |  |
|                                   | WWR – West orientation  |   | WWRw   | -  | 0.16         | 0.17           | 0.05               | 0.14   | 0.24      |  |  |
|                                   | Window to useful floor area ratio   |   | A <sub>wi</sub> /A <sub>use</sub>  | -  | 0.14         | 0.07           | 0.09               | 0.12   | 0.18      |  |  |
|                                   | Roof type -   |   |  |  |              |                |                    |  |           |  |  |
|                                   | U-value of the roof   |   | U <sub>fl;up</sub>   | W/(m²⋅K)   | 1.10         | 0.58           | 0.43               | 1.20   | 1.52      |  |  |
|                                   | External walls type   |   | Hollow brick masonry: 84%, Solid brick masonry: 16%  |  |              |                |                    |  |           |  |  |
|                                   | <i>U</i> -value of the wall   |   | U <sub>wl</sub>  | W/(m²⋅K)   | 0.78         | 0.36           | 0.43               | 0.73   | 0.97      |  |  |
| ENVELOPE                          | Slab on ground floor type   |   |  |  | 1            | -              |                    |  | 1         |  |  |
| Ē                                 | U-value of the f  | loor  | U <sub>fl;lw</sub>   | W/(m²·K)   | 0.97         | 0.63           | 0.44               | 0.97   | 1.23      |  |  |
| EN                                | Windows type  |   | Double glazing, aluminum frame, no thermal break: 42%, Single glazing, wooden frame: 32%, Single glazing, aluminum frame: 10%, Double glazing, PVC frame: 7%, Double glazing, aluminum frame wi thermal break: 3%, Double glazing, wooden frame: 3%, Unknown: 3% |  |              |                |                    |  |           |  |  |
|                                   | U-value of the windows  |   | Uw   | W/(m <sup>2</sup> ·K)  | 3.42         | 1.14           | 2.70               | 2.90   | 4.90      |  |  |
|                                   | Shading system  | type  |  | ,,,,,,   |              |                | 5, Curtains: 3%, U |  |           |  |  |
|                                   |   | Occupancy density                                     |  | person/m <sup>2</sup>  | 0.039        | 0.032          | 0.019              | 0.033  | 0.046     |  |  |
| GAINS and<br>VENTILATION          | · · ·   |   | 0 <sub>C</sub><br>W <sub>L</sub>   | W/m <sup>2</sup>   | 0.000        | 0.052          |                    |  |           |  |  |
| AT                                |   | Lighting power density *<br>Equipment power density * |  |  |              |                |                    |  |           |  |  |
| GAINS and<br>ENTILATIOI           | Type of ventilat  |   |  | W <sub>A</sub> W/m <sup>2</sup> UNI EN 16798-1 - A.8.3           Natural: 100% |              |                |                    |  |           |  |  |
|                                   | Air exchange ra   |   | n  | h-1  | 0.30         | 0.00           | 0.30               | 0.30   | 0.30      |  |  |
| THERMAL SYSTEMS                   |   |   |  |  | 1            | 1              |                    |  | 0.50      |  |  |
|                                   | Heating system type     Autonomous: 97%, Centralized: 3%       Heating generator     Traditional Boiler: 67%, Fireplace: 16%, Condensing Boiler: 10%, Unknown: 7% |   |  |  |              |                |                    | a. 70/   |           |  |  |
|                                   | Heating generator<br>Daily operating time of the  |   |  |  | er: 07%, Fir | epiace: 10%, C |                    | er: 10%, Unknowi   | 1. 7%     |  |  |
|                                   | heating system  |   | tн   | h  | 8.00         | 0.00           | 8.00               | 8.00   | 8.00      |  |  |
|                                   | Energy carrier  |   |  | ral Gas: 61% Sol   | id biomass   | : 16%   PG· 10 | %. Electricity: 79 | 6. Gas Oil 3% 11n  | known: 3% |  |  |
|                                   | Heating emission sub-system   |   | Natural Gas: 61%, Solid biomass: 16%, LPG: 10%, Electricity: 7%, Gas Oil 3%, Unknown: 3%<br>Radiators: 97%, Unknown: 3%  |  |              |                |                    |  |           |  |  |
|                                   | Cooling system type   |   | Absent: 100%   |  |              |                |                    |  |           |  |  |
|                                   | Daily operating time of the cooling system  |   | tc   | h  | -            | -              | -                  | -  | -         |  |  |
|                                   | Cooling system  |   |  |  | 1            | -              | I                  | l  | 1         |  |  |
|                                   | DHW system ty   |   |  |  |              |                |                    |  |           |  |  |
|                                   |   |   |  |  |              | -              |                    |  |           |  |  |
|                                   | DHW generator   |   |  |  |              |                |                    |  |           |  |  |



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. Residential buildings – Apartment blocks – 1971/1980 – Zone D – Calabria

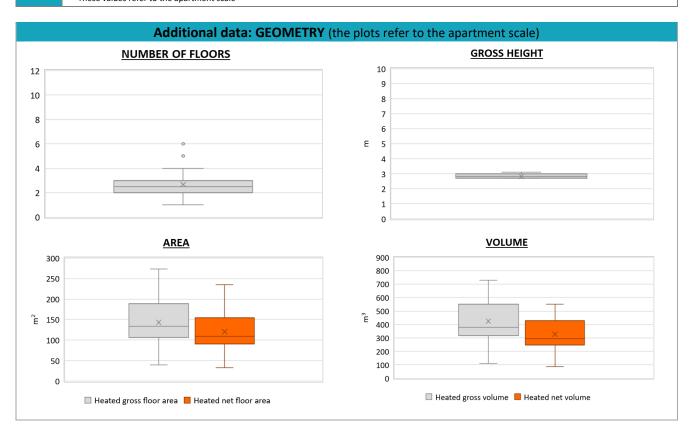






| Region:                 | egion: Calabria  |                    |    |  |  |
|-------------------------|--|--------------------|----|--|--|
| Building category:      | category: Residential buildings – Apartments (in multifamily blocks) |                    |    |  |  |
| Period of construction: | 1971-1980  | 1971-1980_D_CAL    |    |  |  |
| Climatic zone:          | D  | Number of records: | 31 |  |  |

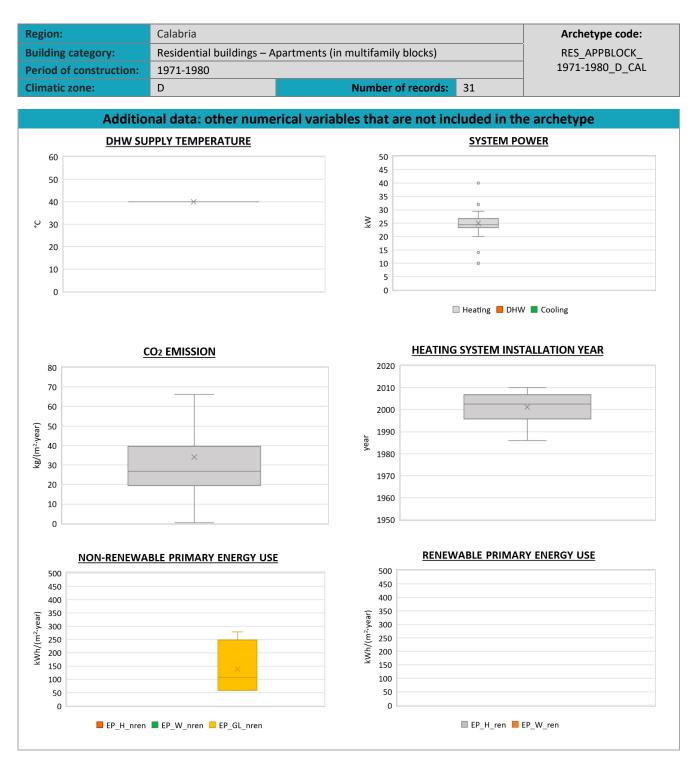
| ADDITIONAL DATA         |   |   |                    |   |                       |                        |                 |                        |
|-------------------------|---|---|--------------------|---|-----------------------|------------------------|-----------------|------------------------|
|                         | Data  | Symbol  | Unit of<br>measure | Mean<br>value   | Standard<br>deviation | Q1 (first<br>quartile) | Median<br>value | Q3 (third<br>quartile) |
| GEOMETRY:<br>apartments | Inter-storey height                         | H <sub>n</sub>                                  | m                  | 2.83  | 0.14                  | 2.70                   | 2.82            | 3.00                   |
|                         | Heated gross floor area                     | A <sub>H;g</sub>                                | m <sup>2</sup>     | 143.20  | 56.04                 | 106.39                 | 134.00          | 188.60                 |
|                         | Heated net floor area                       | A <sub>H;n</sub>                                | m <sup>2</sup>     | 120.30  | 46.81                 | 90.72                  | 109.28          | 154.04                 |
|                         | Heated gross volume                         | V <sub>H;g</sub>                                | m <sup>3</sup>     | 440.41  | 174.94                | 323.11                 | 379.85          | 559.25                 |
|                         | Heated net volume                           | V <sub>H;n</sub>                                | m <sup>3</sup>     | 339.85  | 132.27                | 251.41                 | 295.06          | 434.55                 |
| THERMAL SYSTEMS         | Heating efficiency or COP                   | $\eta_{ m H;gen}$ or $\mathcal{COP}_{ m H;gen}$ | -                  | This value has to be retrieved from suitable datasheets |                       |                        |                 |                        |
|                         | Total heating power *                       | P <sub>H;gen</sub>                              | kW                 | 24.98   | 5.53                  | 23.30                  | 24.40           | 27.35                  |
|                         | Cooling efficiency or EER                   | η <sub>C;gen</sub> or<br>EER <sub>C;gen</sub>   | -                  | This value has to be retrieved from suitable datasheets |                       |                        |                 |                        |
|                         | Total cooling power                         | P <sub>C;gen</sub>                              | kW                 | -   | -                     | -                      | -               | -                      |
|                         | Temperature of DHW                          | θw  | °C                 | 40.00   | 0.00                  | 40.00                  | 40.00           | 40.00                  |
|                         | DHW system power                            | P <sub>W;gen</sub>                              | kW                 | -   | -                     | -                      | -               | -                      |
|                         | * These values refer to the apartment scale |   |                    |   |                       |                        |                 |                        |





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