

Region: Trentino Archetype code: **Building category:** Educational EDUC 1971-1980\_F\_TN **Period of construction:** 1971-1980 Climatic zone: Number of records:

Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014):

External walls: no data available Roof slabs: no data available

Data sources:

EPC databases (100%)

| Data                     |  | Symbol Unit of  |                       | Mean                   | Standard  | Q1 (first | Median | Q3 (third |  |  |  |
|--------------------------|--|---|-----------------------|------------------------|-----------|-----------|--------|-----------|--|--|--|
|                          |  |   | measure               | value                  | deviation | quartile) | value  | quartile) |  |  |  |
| BUILDING GEOMETRY        | Number of floors                             | n <sub>f</sub>  | -                     | -                      | -         | -         | -      | -         |  |  |  |
|                          | 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>        | -                      | -         | -         | -      | -         |  |  |  |
|                          | Heated net floor area                        | A <sub>H;n</sub>  | m <sup>2</sup>        | 1704                   | 1152      | 776       | 1275   | 2537      |  |  |  |
|                          | Heated gross volume                          | V <sub>H;g</sub>  | m³                    | -                      | -         | -         | -      | -         |  |  |  |
|                          | Heated net volume                            | V <sub>H;n</sub>  | m³                    | 7944                   | 5939      | 3474      | 5392   | 12728     |  |  |  |
|                          | Compactness ratio                            | A <sub>env</sub> /V <sub>H;g</sub>  | m <sup>-1</sup>       | 0.46                   | 0.10      | 0.41      | 0.44   | 0.49      |  |  |  |
| 9                        | WWR – North orientation                      | WWR <sub>N</sub>  | -                     | -                      | -         | -         | -      | -         |  |  |  |
| BG                       | WWR – South orientation                      | <i>WWR</i> s  | -                     | -                      | -         | -         | -      | -         |  |  |  |
| _                        | WWR – East orientation                       | WWR <sub>E</sub>  | -                     | -                      | -         | -         | -      | -         |  |  |  |
|                          | WWR – West orientation                       | <i>WWR</i> <sub>W</sub>   | -                     | -                      | -         | -         | -      | -         |  |  |  |
|                          | Window to useful floor area ratio            | A <sub>wi</sub> /A <sub>use</sub>   | -                     | -                      | -         | -         | -      | -         |  |  |  |
|                          | Roof type                                    |   |                       |                        | -         |           |        |           |  |  |  |
|                          | <i>U</i> -value of the roof                  | U <sub>fl;up</sub>  | W/(m <sup>2</sup> ·K) | _                      | -         | _         | _      | _         |  |  |  |
|                          | External walls type                          | - п,ир  | , (,                  |                        | -         |           |        | 1         |  |  |  |
| 띭                        | <i>U</i> -value of the wall                  | U <sub>wl</sub>   | W/(m <sup>2</sup> ·K) | -                      | -         | -         | -      | _         |  |  |  |
| 잂                        | Slab on ground floor type                    | - Wi  | ,,,,,                 |                        | -         | I         | I      | 1         |  |  |  |
| ENVELOPE                 | U-value of the floor                         | U <sub>fl;lw</sub>  | W/(m <sup>2</sup> ·K) | -                      | _         | -         | -      | -         |  |  |  |
| ᇳ                        | Windows type                                 | - 11,1W   | , (                   |                        | _         |           |        |           |  |  |  |
|                          | <i>U</i> -value of the windows               | U <sub>W</sub>  | W/(m <sup>2</sup> ·K) | _                      | _         | _         | _      | _         |  |  |  |
|                          | Shading system type                          | O W   | , (                   |                        | _         |           |        |           |  |  |  |
|                          | Occupancy density *                          | O <sub>C</sub> person/m <sup>2</sup> UNI EN 16798-1 - Table A.19  |                       |                        |           |           |        |           |  |  |  |
| υZ                       | Lighting power density *                     | W <sub>L</sub>  | W/m <sup>2</sup>      | UNI EN 16798-1 - A.8.3 |           |           |        |           |  |  |  |
| GAINS and<br>VENTILATION | Equipment power density                      | W <sub>A</sub>  | W/m²                  | UNI EN 16798-1 - A.8.3 |           |           |        |           |  |  |  |
| ENT ENT                  | Type of ventilation                          |   | Natural: 100%         |                        |           |           |        |           |  |  |  |
| >                        | Air exchange rate *                          | n   |                       |                        |           |           |        |           |  |  |  |
|                          | Heating system type                          | Centralized: 62%; Autonomous: 21%; Unknown 17%  |                       |                        |           |           |        |           |  |  |  |
|                          | Heating generator                            | Boiler (unknown type): 96%; Unknown 4%  |                       |                        |           |           |        |           |  |  |  |
|                          | Daily operating time of the heating system * | t <sub>H</sub> h No limitation  |                       |                        |           |           |        |           |  |  |  |
|                          | Energy carrier                               |   |                       |                        |           |           |        |           |  |  |  |
| THERMAL SYSTEMS          | Heating emission sub-<br>system              | Natural gas 67%; Gas oil: 29%; Electricity from PV, wind turbines, hydraulic turbines: 4%  -  |                       |                        |           |           |        |           |  |  |  |
|                          | Cooling system type                          | Unknown: 100%   |                       |                        |           |           |        |           |  |  |  |
|                          | Daily operating time of the                  | t <sub>C</sub>  | h                     | No limitation          |           |           |        |           |  |  |  |
|                          | cooling system * Cooling emission sub-       | _   |                       |                        |           |           |        |           |  |  |  |
|                          | system                                       | A Leave to the little 2007 Controlled to the little 2007 State of the   |                       |                        |           |           |        |           |  |  |  |
|                          | DHW system type                              | Autonomous – coupled with heating: 38%; Centralized – coupled with heating: 29%; District heating: 17%; Autonomous - detached from heating: 8%; Unknown: 8% |                       |                        |           |           |        |           |  |  |  |
|                          | DHW generator                                | Natural gas boiler: 76%; Electric Heat Pump: 12%; Unknown 12%   |                       |                        |           |           |        |           |  |  |  |
|                          | * These values were not available in         | These values were not available in the considered sources, and are thus derived from UNI EN Standards   |                       |                        |           |           |        |           |  |  |  |



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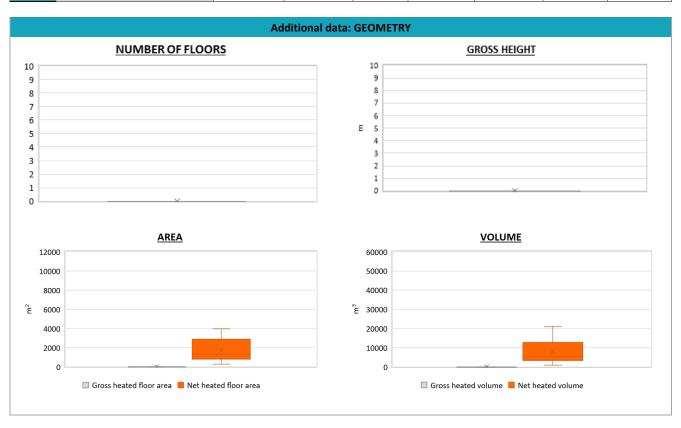
 Climatic zone:
 F
 Number of records:
 24





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| ADDITIONAL DATA |                           |  |                 |   |                    |                     |                 |                     |
|-----------------|---------------------------|--|-----------------|---|--------------------|---------------------|-----------------|---------------------|
|                 | Data                      | Symbol   | Unit of measure | Mean<br>value   | Standard deviation | Q1 (first quartile) | Median<br>value | Q3 (third quartile) |
| THERMAL SYSTEMS | Heating efficiency or COP | η <sub>H;gen</sub> or<br><i>COP</i> <sub>H;gen</sub> | -               | This value has to be retrieved from suitable datasheets |                    |                     |                 |                     |
|                 | Total heating power       | P <sub>H;gen</sub>                                   | kW              | 292   | 228                | 144                 | 170             | 425                 |
|                 | Cooling efficiency or EER | η <sub>C;gen</sub> or<br><i>EER</i> <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        | $\vartheta_{W}$                                      | °C              | 40  | -                  | 40                  | 40              | 40                  |
|                 | DHW system power          | P <sub>W;gen</sub>                                   | kW              | 262   | 242                | 103                 | 150             | 374                 |





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