

 Region:
 Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)
 Archetype code:

 Building category:
 Non-residential buildings - Offices
 OFF_-1945_E_VAL

 Period of construction:
 < 1945</td>

 Climatic zone:
 E
 Number of records:
 12

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

External walls: solid brick masonry (cod. MLP01) or stone wall (cod. MPI02).

Roof slabs: pitched wooden roof (cod. CIN05).

Data sources: EPC databases (100%)

Data Symbol Unit of Mean **Standard** Q1 (first Median Q3 (third measure value deviation quartile) value quartile) Number of floors $n_{\rm f}$ Gross height H_g m Footprint area $A_{\text{footprint}}$ m^2 Heated gross floor area m² $A_{H;g}$ **BUILDING GEOMETRY** 1617.5 1970.1 900.3 1927.2 Heated net floor area $A_{H;n}$ m² 261.2 Heated gross volume 7749.7 8221.7 1194.8 5763.1 11589.7 $V_{\rm H;g}$ m^3 $V_{\underline{\mathsf{H};\mathsf{n}}}$ Heated net volume m^3 4396.2 5541.0 663.1 3353.3 4361.0 Compactness ratio $A_{\rm env}/V_{\rm H;g}$ m⁻¹ 0.51 0.28 0.30 0.43 0.62 WWR - North orientation WWR_{N} 0.12 0.06 0.08 0.11 0.17 WWR - South orientation WWR_S 0.12 0.06 0.08 0.11 0.17 WWR - East orientation 0.12 0.06 0.08 0.11 0.17 WWR_F WWR - West orientation WWR_W 0.12 0.06 0.08 0.11 0.17 Window to useful floor area 0.15 0.04 0.12 0.15 0.18 A_{wi}/A_{use} ratio Roof type U-value of the roof ** $U_{\mathrm{fl};\underline{\mathsf{up}}}$ $W/(m^2 \cdot K)$ 1.34 0.83 0.59 1.24 2.16 External walls type Solid Brick masonry: 67%; Masonry with local stones: 33% U-value of the wall $W/(m^2 \cdot K)$ 0.59 1.55 $U_{\rm wl}$ 1.26 0.97 1.30 INVELOPE Slab on ground floor type U-value of the floor ** $U_{\mathsf{fl;lw}}$ $W/(m^2 \cdot K)$ 0.89 0.47 0.54 0.90 Double glazing, wooden frame: 56%; Single glazing, wooden frame: 33%; Double glazing, PVC frame: Windows type 11% *U*-value of the windows U_{W} $W/(m^2 \cdot K)$ 3.41 1.45 2.71 2.98 3.93 Shading system type UNI EN 16798-1 - Table A.19 Occupancy density * **O**c person/m² /ENTILATION **GAINS and** UNI EN 16798-1 - A.8.3 Lighting power density * W_{L} W/m² Equipment power density * W/m^2 UNI EN 16798-1 - A.8.3 W_A Type of ventilation h-1 Air exchange rate * n Heating system type Autonomous: 100% Heating generator Boiler (unknown type): 78%; Heat exchanger of district heating/cooling: 22% Daily operating time of the t_{H} h 14.0 0.0 14.0 14.0 14.0 heating system * **THERMAL SYSTEMS** Natural Gas: 56%; Gas Oil: 33%; District heating: 11% **Energy carrier** Heating emission sub-system Absent: 83%; Air-cooled chiller: 17% Cooling system type Daily operating time of the h tc cooling system * Cooling emission sub-system Autonomous, detached from heating: 67%; Centralized, coupled with heating: 17%; Autonomous, DHW system type coupled with heating: 8%; Centralized, detached from heating: 8% DHW generator Unknown: 91%; Electric boiler: 9% * These values are derived from UNI EN ISO Standards; ** U-values of the upper slab face the external environment, and the lower slab is in contact with the ground



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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.



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| ADDITIONAL DATA | | | | | | | | |
|-----------------|---|--|-----------------|---|--------------------|------------------------|-----------------|---------------------|
| | Data | Symbol | Unit of measure | Mean value | Standard deviation | Q1 (first quartile) | Median value | Q3 (third quartile) |
| S | Heating efficiency or COP | η _{H;gen} or COP _{H;gen} | - | - This value has to be retrieved from suitable datasheets | | | | tasheets |
| THERMAL SYSTEMS | Total heating power | P _{H;gen} | kW | 32.0 | 0.0 | 32.0 | 32.0 | 32.0 |
| | Cooling efficiency or EER | $\eta_{	extsf{C};	extsf{gen}}$ or $	extsf{\textit{EER}}_{	extsf{C};	extsf{gen}}$ | - | This value has to be retrieved from suitable datasheets | | | | |
| | Total cooling power | P _{C;gen} | kW | - | - | = | - | - |
| | Temperature of DHW | ϑw | °C | 40.0 | 0.0 | 40.0 | 40.0 | 40.0 |
| | DHW system power | P _{W;gen} | kW | 61.8 | 140.8 | 1.8 | 4.8 | 8.7 |
| | * This value refers to the building scale | | | | | | | |

Numerical variables - GAINS, VENTILATION and SYSTEMS USAGE **AIR CHANGE RATE OCCUPACY DENSITY** 5.00 0.30 4.50 0.25 4.00 3.50 0.20 3.00 2.50 0.15 2.00 0.10 1.50 1.00 0.05 0.50 0.00 0.00 **DAILY OPERATING TIME INTERNAL GAINS POWER DENSITY** 14 10 12 9 8 10 5 6 4 3 2 2 1 0 ☐ Heating ☐ Cooling



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