

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

Building category:
Non-residential buildings - Offices
OFF\_1982-2005\_E\_VAL

Period of construction:
1982-2005
Climatic zone:
E
Number of records: 7

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

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

<u>External walls</u>: solid brick masonry with thermal insulation (cod. MCV04) or hollow brick masonry with thermal insulation (cod. MCV02).

<u>Roof slabs</u>: insulated reinforced concrete floor slab for walkable flat roof (cod. COP03), for pitched roof (cod. CIN03) or insulated wooden floor slab for pitched roof (cod. CIN02).

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	$A_{\text{footprint}}$	m²	-	-	-	-	-		
	Heated gross floor area	$A_{H;g}$	m²	-	-	-	-	-		
	Heated net floor area	$A_{H;n}$	m²	321.9	403.2	139.3	139.3	235.5		
	Heated gross volume	$V_{H;g}$	m³	1604.0	1802.8	780.5	780.5	1315.8		
	Heated net volume	$V_{H;n}$	m³	1147.3	1363.1	452.2	452.2	1025.1		
	Compactness ratio	$A_{\rm env}/V_{\rm H;g}$	m⁻¹	0.58	0.15	0.52	0.52	0.61		
	WWR – North orientation	$WWR_N$	-	0.12	0.10	0.07	0.07	0.13		
	WWR – South orientation	<i>WWR</i> <sub>S</sub>	-	0.12	0.10	0.07	0.07	0.13		
	WWR – East orientation	WWR <sub>E</sub>	-	0.12	0.10	0.07	0.07	0.13		
	WWR – West orientation	$WWR_W$	-	0.12	0.10	0.07	0.07	0.13		
	Window to useful floor area ratio	A <sub>wi</sub> /A <sub>use</sub>	-	0.20	0.09	0.14	0.14	0.21		
	Roof type				-					
	<i>U</i> -value of the roof **	$U_{fl;up}$	W/(m²·K)	0.87	0.58	0.51	0.51	1.17		
ENVELOPE	External walls type	Solid Brick masonry: 57%; Hollow brick masonry: 43%								
	<i>U</i> -value of the wall	$U_{ m wl}$	W/(m²·K)	0.75	0.15	0.81	0.81	0.81		
	Slab on ground floor type				-					
	<i>U</i> -value of the floor **	$U_{fl;lw}$	W/(m²·K)	-	-	-	-	-		
	Windows type	Double glazing, wooden frame: 100%								
	<i>U</i> -value of the windows	$U_{W}$	W/(m²⋅K)	2.62	0.41	2.49	2.49	2.67		
	Shading system type	-								
_ z	Occupancy density *	O <sub>C</sub>	person/m²	UNI EN 16798-1 - Table A.19						
and TO	Lighting power density *	$W_{L}$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3						
GAINS and VENTILATION	Equipment power density *	$W_{A}$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3						
GAI	Type of ventilation	-								
>	Air exchange rate *	n	h <sup>-1</sup>	-	-	-	-	-		
	Heating system type	Autonomous: 100%								
	Heating generator	Boiler (unknown type): 86%; Condensing Boiler: 14%								
THERMAL SYSTEMS	Daily operating time of the heating system *	tн	h	14.0	0.0	14.0	14.0	14.0		
	Energy carrier	Natural Gas: 100%								
	Heating emission sub-system	-								
	Cooling system type	Absent: 86%; Air-cooled chiller: 14%								
	Daily operating time of the	t <sub>C</sub>	h	_	_	_	_	_		
	cooling system *	٠,								
	Cooling emission sub-system	-								
	DHW system type	Centralized, coupled with heating: 57%; Autonomous, detached from heating: 29%; Centralized, detached from heating: 14%								
	DHW generator	Unknown: 86%; Electric boiler: 14%								
	* These values are derived from UNI EN ISO Standards; ** <i>U</i> -values of the upper slab face the external environment, and the lower slab is in contact wit 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)				
THERMAL SYSTEMS	Heating efficiency or COP	η <sub>H;gen</sub> or COP <sub>H;gen</sub>	-	This value has to be retrieved from suitable datasheets								
	Total heating power	P <sub>H;gen</sub>	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 <sub>C;gen</sub>	kW	-	-	-	-	-				
	Temperature of DHW	ϑw	°C	40.0	0.0	40.0	40.0	40.0				
	DHW system power	P <sub>W;gen</sub>	kW	1236.2	2047.7	54.3	105.0	1852.5				
	* This value refers to the building scale											





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