

Region: Aosta Valley Archetype code: **Building category:** Non-residential buildings - Offices OFF_-1945_E-F_VAL **Period of construction:** < 1945 E-F Climatic zone: Number of records: Data sources:

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

External walls: stone wall (cod. MPI02). Roof slabs: pitched wooden roof (cod. CIN05). 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 _f	-	-	-	-	-	-		
	Gross height	Hg	m	-	-	-	-	-		
	Footprint area	A _{footprint}	m²	-	-	-	-	-		
	Heated gross floor area	A _{H;g}	m²	-	-	-	-	-		
	Heated net floor area	A _{H;n}	m²	663.8	543.8	340.4	569.3	785.8		
	Heated gross volume	V _{H;g}	m³	3129.5	2629.7	1362.0	2185.0	3847.8		
	Heated net volume	V _{H;n}	m³	1796.6	1456.1	923.1	1394.2	2336.3		
	Compactness ratio	A _{env} /V _{H;g}	m⁻¹	0.52	0.16	0.43	0.49	0.56		
	WWR – North orientation	WWR _N	-	0.11	0.04	0.08	0.11	0.14		
E E	WWR – South orientation	WWR _S	-	0.11	0.04	0.08	0.11	0.14		
	WWR – East orientation	WWR _E	-	0.11	0.04	0.08	0.11	0.14		
	WWR – West orientation	<i>WWR</i> _w	-	0.11	0.04	0.08	0.11	0.14		
	Window to useful floor area ratio	A _{wi} /A _{use}	-	0.16	0.07	0.11	0.14	0.18		
	Roof type -									
	<i>U</i> -value of the roof **	U _{fl;up}	W/(m²·K)	0.79	0.79	0.29	0.38	0.85		
	External walls type	Masonry v	vith local stones	: 71%; Solid	Brick masonry	v: 17%; Hollow b	orick masonry: 8%	; Unknown: 4%		
퓚	<i>U</i> -value of the wall	U _{wl}	W/(m²·K)	1.42	0.72	0.68	1.71	1.91		
91	Slab on ground floor type				-					
ENVELOPE	<i>U</i> -value of the floor **	U _{fl;lw}	W/(m²·K)	1.16	0.57	0.71	1.14	1.61		
	Windows type	Double glazing, wooden frame: 89%; Single glazing, wooden frame: 6%; Triple glazing, wooden frame: 5%								
	<i>U</i> -value of the windows	U_{W}	W/(m²⋅K)	2.57	0.67	2.19	2.82	2.99		
	Shading system type				-					
_ z	Occupancy density *	<i>O</i> _C	person/m²		U	NI EN 16798-1 -	Table A.19			
GAINS and VENTILATION	Lighting power density *	W_{L}	W/m ²	UNI EN 16798-1 - A.8.3						
NS F]I	Equipment power density *	W _A	W/m ² UNI EN 16798-1 - A.8.3							
GAI	Type of ventilation		-							
· >	Air exchange rate *	n	h ⁻¹	-	-	-	-	-		
	Heating system type	Autonomous: 100%								
	Heating generator	Boiler (unknown type): 75%; Unknown: 9%; Condensing Boiler: 4%; Traditional Boiler: 4%; Fireplace: 4%; Heat exchanger of district heating/cooling: 4%								
THERMAL SYSTEMS	Daily operating time of the heating system *	t _H	h	-						
	Energy carrier		Natura	tural Gas: 45%; Gas Oil: 36%; LPG: 10%; Solid biomass: 9%						
	Heating emission sub-system	-								
	Cooling system type	Absent: 83%; Air-cooled chiller: 17%								
	Daily operating time of the cooling system *	t _C	h	-	-	-	-	-		
	Cooling emission sub-system	-								
	DHW system type	Autonomous, detached from heating: 58%; Autonomous, coupled with heating: 21%; Centralized, coupled with heating: 21%								
	DHW generator	Unknown: 92%; Natural gas boiler: 8%								
	* 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 with the ground									



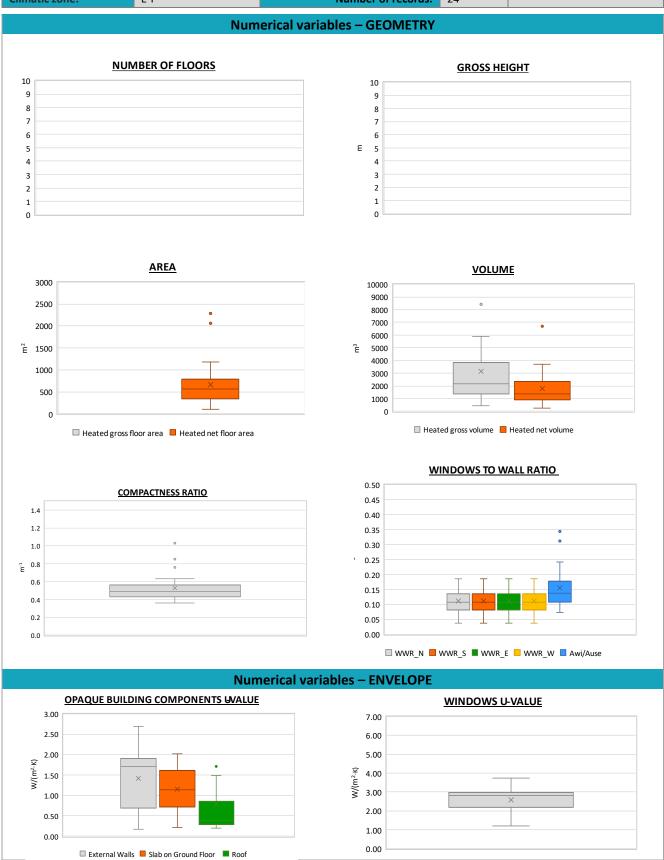
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 Aosta Valley

 Building category:
 Non-residential buildings - Offices

 Period of construction:
 < 1945</td>

 Climatic zone:
 E-F

 Number of records:
 24



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 _{H;gen} or COP _{H;gen}	-	This value has to be retrieved from suitable datasheets				
	Total heating power	P _{H;gen}	kW	25.4	9.8	20.7	30.0	30.9
	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	17.4	7.1	14.9	17.4	19.9
	Temperature of DHW	ϑ_{W}	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power	P _{W;gen}	kW	22.8	34.7	1.2	5.0	30.0
	* This value refers to the building scale							

Numerical variables - GAINS, VENTILATION and SYSTEMS USAGE **AIR EXCHANGE RATE OCCUPACY DENSITY** 0.30 5.00 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 **INTERNAL GAINS POWER DENSITY DAILY OPERATING TIME** 10 14 12 8 10 7 8 6 5 4 3 2 2 1 \square Heating \blacksquare Cooling



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