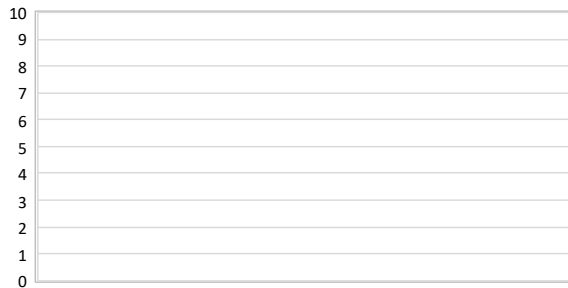


Region:		Aosta Valley					Archetype code: RES_SINGLE_-1919_E-F_VAL	
Building category:		Residential buildings - Single family houses						
Period of construction:		< 1919						
Climatic zone:		E-F	Number of records:		341			
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): <u>External walls</u> : stone wall (cod. MPI02). <u>Roof slabs</u> : pitched wooden roof (cod. CIN05).							Data sources: EPC databases (100%)	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	n_f	-	-	-	-	-	-
	Gross height	H_g	m	-	-	-	-	-
	Footprint area	$A_{\text{footprint}}$	m ²	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m ²	92.2	64.6	51.3	74.4	111.6
	Heated gross volume	$V_{H,g}$	m ³	392.0	271.9	220.4	308.8	497.9
	Heated net volume	$V_{H;n}$	m ³	244.8	169.2	138.5	188.0	302.9
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.82	0.27	0.67	0.80	0.94
	WWR – North orientation	WWR_N	-	0.08	0.04	0.06	0.07	0.10
	WWR – South orientation	WWR_S	-	0.08	0.04	0.06	0.07	0.10
	WWR – East orientation	WWR_E	-	0.08	0.04	0.06	0.07	0.10
	WWR – West orientation	WWR_W	-	0.08	0.04	0.06	0.07	0.10
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.14	0.06	0.10	0.13	0.17
	ENVELOPE	Roof type	-					
U-value of the roof **		$U_{fi;up}$	W/(m ² ·K)	0.57	0.60	0.24	0.36	0.64
External walls type		Masonry with local stones: 62%; Solid Brick masonry: 23%; Unknown: 8%; Hollow brick masonry: 7%						
U-value of the wall		U_{wl}	W/(m ² ·K)	1.06	0.72	0.38	0.89	1.73
Slab on ground floor type		-						
U-value of the floor **		$U_{fi;lw}$	W/(m ² ·K)	1.03	0.63	0.46	1.00	1.43
Windows type		Double glazing, wooden frame: 78%; Single glazing, wooden frame: 15%; Triple glazing, wooden frame: 4%; Double glazing, PVC frame: 3%						
U-value of the windows		U_W	W/(m ² ·K)	2.45	1.09	1.55	2.39	2.88
Shading system type	-							
GAINS and VENTILATION	Occupancy density *	O_C	person/m ²	UNI EN 16798-1 - Table A.19				
	Lighting power density *	W_L	W/m ²	UNI EN 16798-1 - A.8.3				
	Equipment power density *	W_A	W/m ²	UNI EN 16798-1 - A.8.3				
	Type of ventilation	Natural: 100%						
	Air exchange rate *	n	h ⁻¹	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Autonomous: 100%						
	Heating generator	Boiler (unknown type): 56%; Fireplace: 21%; Traditional Boiler: 8%; Unknown: 7%; Condensing Boiler: 6%; Air-source heat pump: 1%; Heat exchanger of district heating/cooling: 1%						
	Daily operating time of the heating system *	t_H	h	-				
	Energy carrier	LPG: 37%; Solid biomass: 32%; Gas Oil: 17%; Natural Gas: 14%						
	Heating emission sub-system	-						
	Cooling system type	Absent: 99%; Air-cooled chiller: 1%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Autonomous, coupled with heating: 64%; Autonomous, detached from heating: 31%; Centralized, coupled with heating: 5%						
	DHW generator	Unknown: 81%; Natural gas boiler: 12%; Electric boiler: 5%; Electric Heat Pump: 2%						
* 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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Numerical variables – GEOMETRY

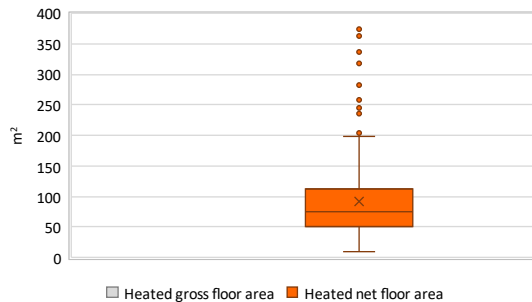
NUMBER OF FLOORS



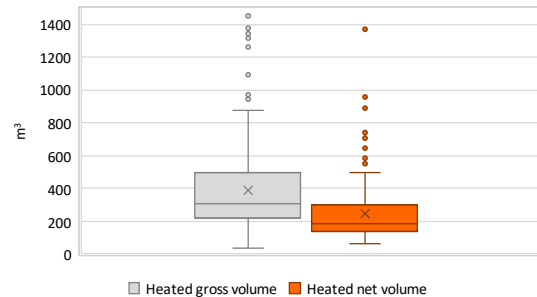
GROSS HEIGHT



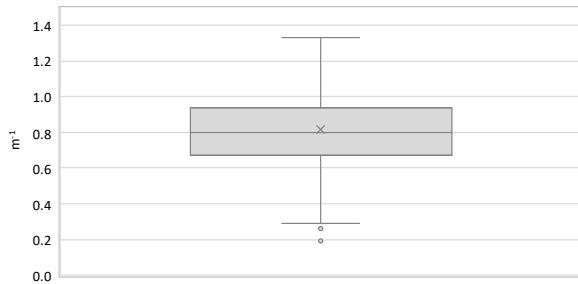
AREA



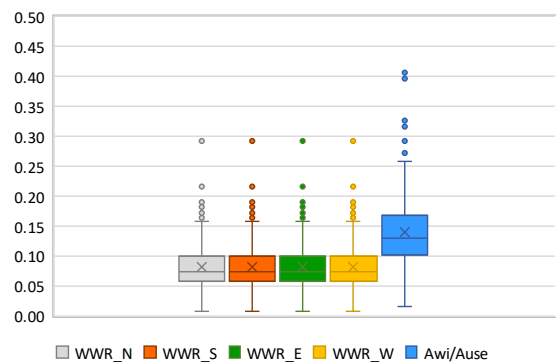
VOLUME



COMPACTNESS RATIO

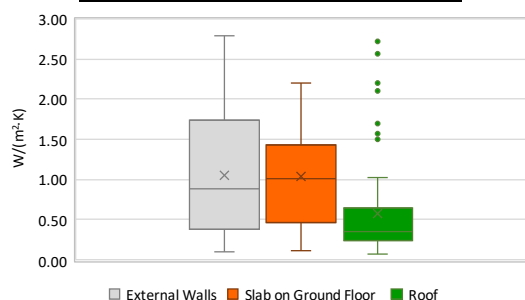


WINDOWS TO WALL RATIO

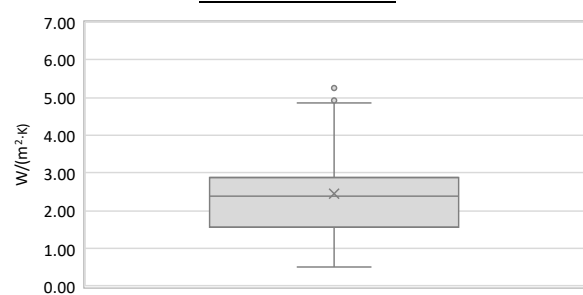


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

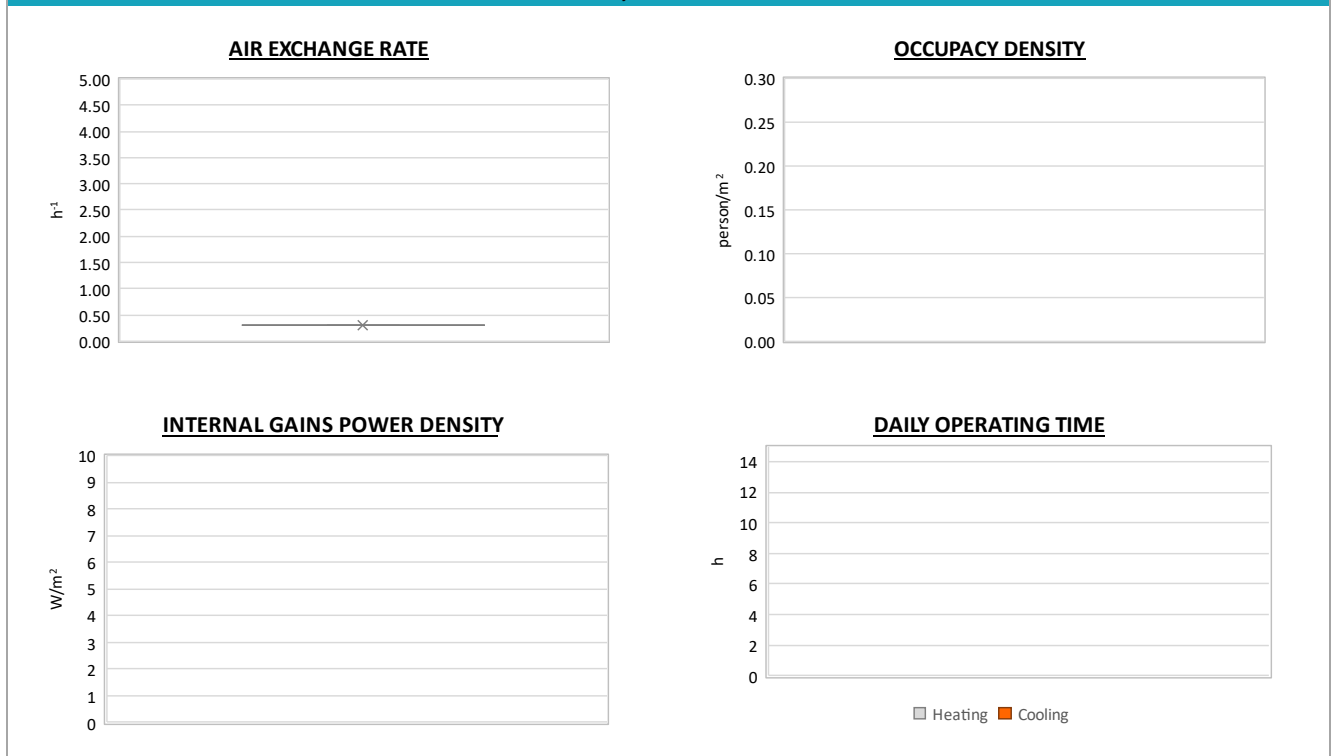


The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.

Region:	Aosta Valley			Archetype code: RES_SINGLE_-1919_E-F_VAL
Building category:	Residential buildings - Single family houses			
Period of construction:	< 1919			
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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 <i>COP</i>	$\eta_{H,gen}$ or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power	$P_{H,gen}$	kW	23.6	13.4	15.2	24.0	29.0
	Cooling efficiency or <i>EER</i>	$\eta_{C,gen}$ or $EER_{C,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power	$P_{C,gen}$	kW	7.3	2.5	6.0	7.0	8.5
	Temperature of DHW	ϑ_W	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power	$P_{W,gen}$	kW	21.4	15.2	11.2	24.0	28.2
	* This value refers to the building scale							

Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE



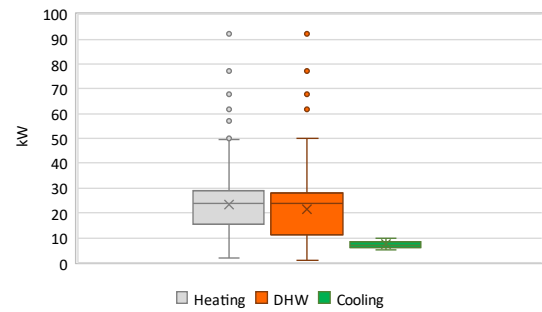
Region:	Aosta Valley	Archetype code: RES_SINGLE_-1919_E-F_VAL
Building category:	Residential buildings - Single family houses	
Period of construction:	< 1919	
Climatic zone:	E-F	
Number of records:		341

Additional data: other numerical variables that are not included in the archetype

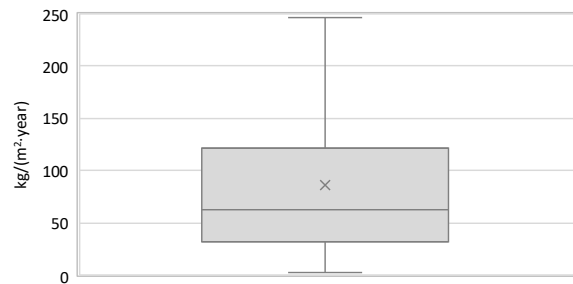
DHW SUPPLY TEMPERATURE



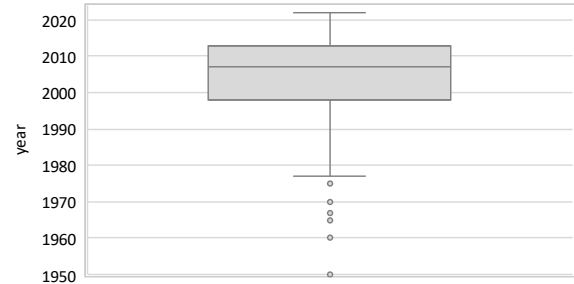
SYSTEM POWER



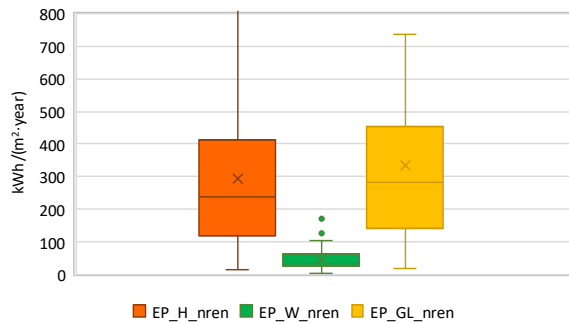
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

