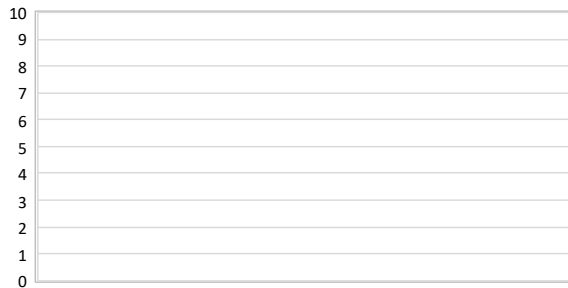


Region:	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)						Archetype code: RES_SINGLE_2006-_E_VAL	
Building category:	Residential buildings - Single family houses							
Period of construction:	> 2005							
Climatic zone:	E	Number of records:		86				
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: hollow brick masonry with thermal insulation (cod. MCV02). Roof slabs: 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 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	134.5	56.0	97.7	126.1	155.1
	Heated gross volume	$V_{H,g}$	m ³	567.5	223.7	414.1	535.5	678.8
	Heated net volume	$V_{H;n}$	m ³	387.2	156.4	291.8	371.0	436.2
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.83	0.16	0.71	0.84	0.93
	WWR – North orientation	WWR_N	-	0.08	0.04	0.06	0.08	0.11
	WWR – South orientation	WWR_S	-	0.08	0.04	0.06	0.08	0.11
	WWR – East orientation	WWR_E	-	0.08	0.04	0.06	0.08	0.11
	WWR – West orientation	WWR_W	-	0.08	0.04	0.06	0.08	0.11
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.19	0.07	0.15	0.18	0.23
ENVELOPE	Roof type	-						
	U-value of the roof **	$U_{fi;up}$	W/(m ² ·K)	0.24	0.06	0.20	0.24	0.28
	External walls type	Hollow brick masonry: 49%; Solid Brick masonry: 28%; Unknown: 20%; Masonry with local stones: 2%; Concrete wall: 1%						
	U-value of the wall	U_{wi}	W/(m ² ·K)	0.24	0.07	0.18	0.24	0.27
	Slab on ground floor type	-						
	U-value of the floor **	$U_{fi;lw}$	W/(m ² ·K)	-	-	-	-	-
	Windows type	Double glazing, wooden frame: 67%; Double glazing, PVC frame: 17%; Triple glazing, wooden frame: 10%; Triple glazing, PVC frame: 6%						
	U-value of the windows	U_W	W/(m ² ·K)	1.47	0.53	1.12	1.33	1.64
GAINS and VENTILATION	Shading system type	-						
	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): 40%; Condensing Boiler: 21%; Unknown: 13%; Air-source heat pump: 12%; Fireplace: 7%; Traditional Boiler: 6%; Water-source heat pump: 1%						
	Daily operating time of the heating system *	t_H	h	14.0	0.0	14.0	14.0	14.0
	Energy carrier	Natural Gas: 48%; LPG: 32%; Solid biomass: 20%						
	Heating emission sub-system	-						
	Cooling system type	Absent: 88%; Air-cooled chiller: 9%; Unknown: 2%; Water-cooled chiller: 1%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Autonomous, coupled with heating: 93%; Autonomous, detached from heating: 6%; Centralized, coupled with heating: 1%						
	DHW generator	Unknown: 57%; Natural gas boiler: 29%; Electric Heat Pump: 13%; Electric boiler: 1%						
* 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								

Region:	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)	Archetype code: RES_SINGLE_2006-_E_VAL
Building category:	Residential buildings - Single family houses	
Period of construction:	> 2005	
Climatic zone:	E	
Number of records: 86		

Numerical variables – GEOMETRY

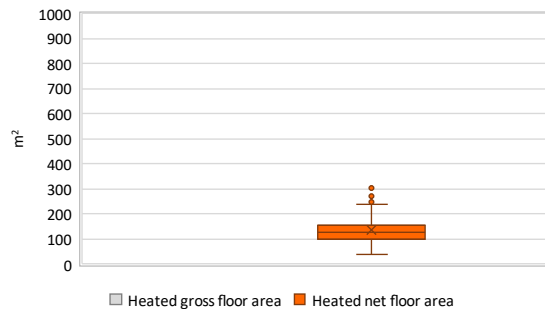
NUMBER OF FLOORS



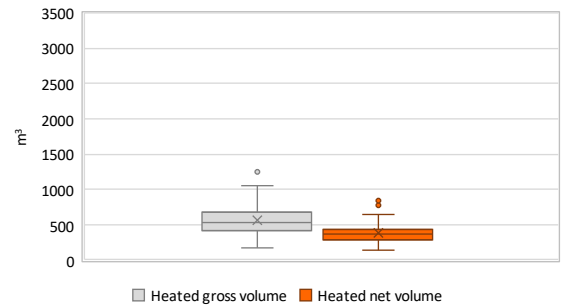
GROSS HEIGHT



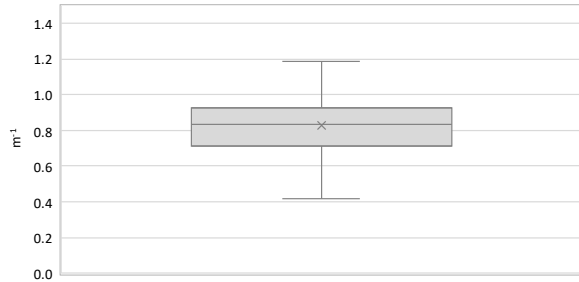
AREA



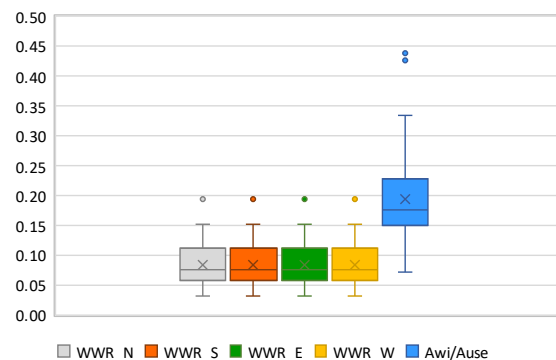
VOLUME



COMPACTNESS RATIO



WINDOWS TO WALL RATIO

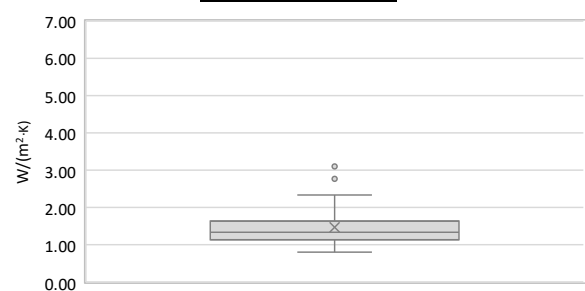


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

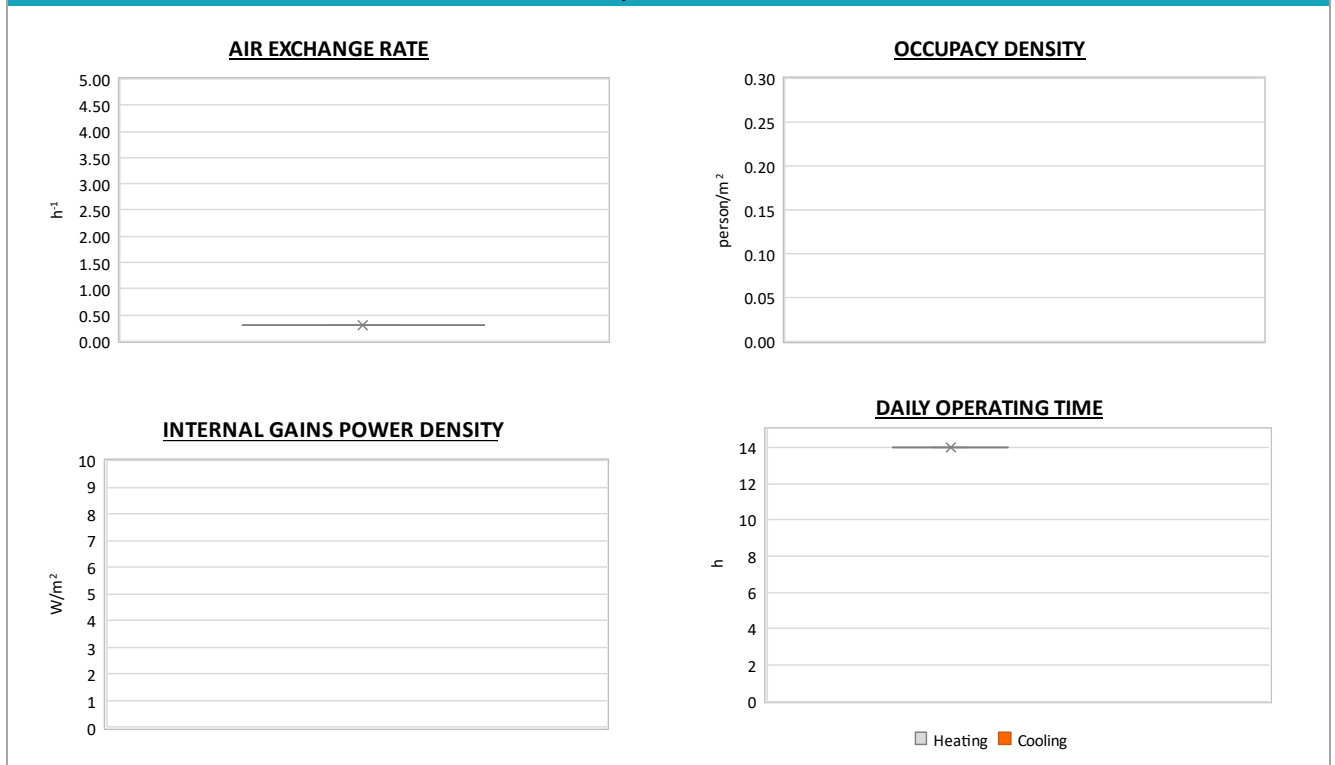


The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.

Region:	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)			Archetype code: RES_SINGLE_2006-_E_VAL
Building category:	Residential buildings - Single family houses			
Period of construction:	> 2005			
Climatic zone:	E	Number of records:	86	

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	21.1	9.1	11.2	24.0	27.0
	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	9.1	5.0	6.9	8.0	9.5
	Temperature of DHW	ϑ_W	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power	$P_{W,gen}$	kW	21.2	9.3	12.1	24.0	27.0
* This value refers to the building scale								

Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE



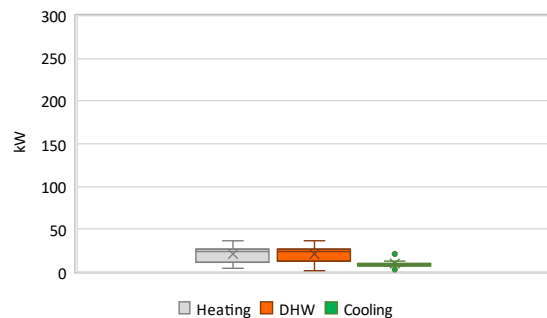
Region:	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)			Archetype code: RES_SINGLE_2006-_E_VAL
Building category:	Residential buildings - Single family houses			
Period of construction:	> 2005			
Climatic zone:	E	Number of records:	86	

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

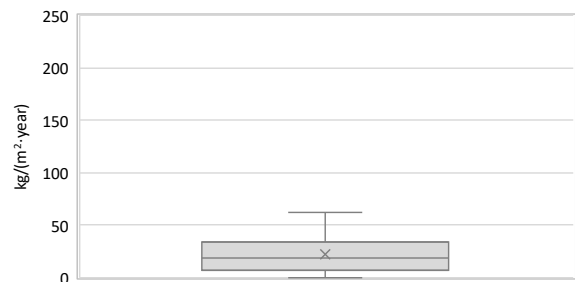
DHW SUPPLY TEMPERATURE



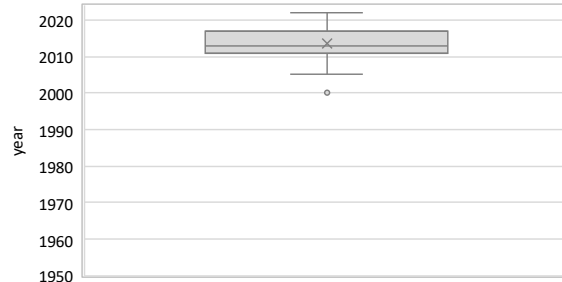
SYSTEM POWER



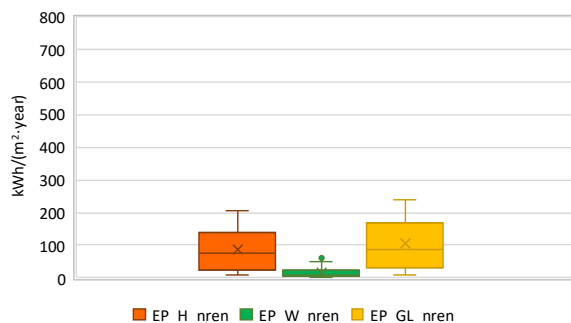
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

