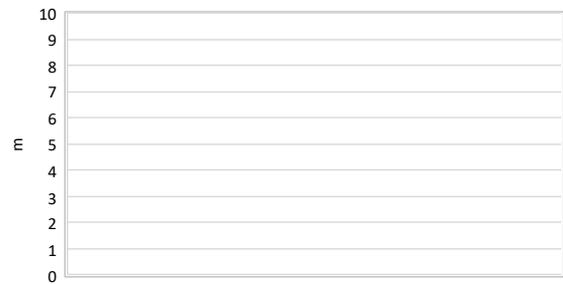
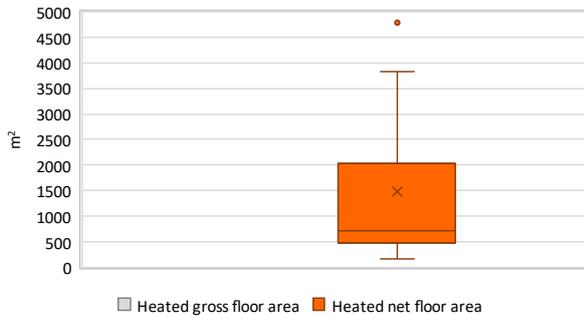
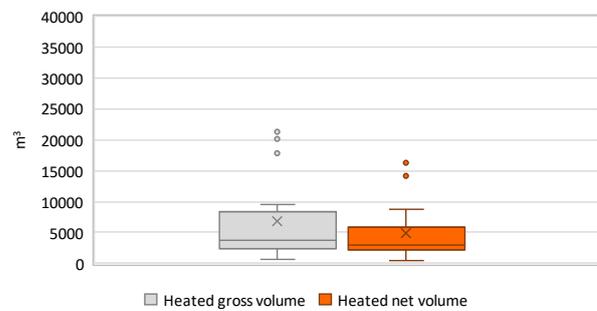
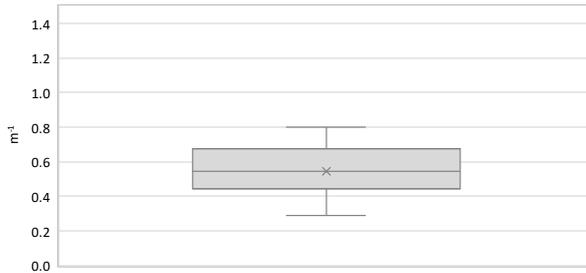
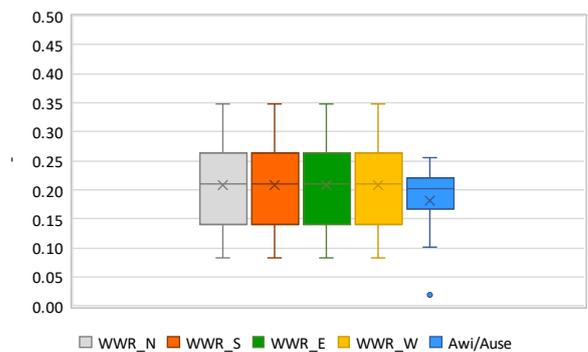
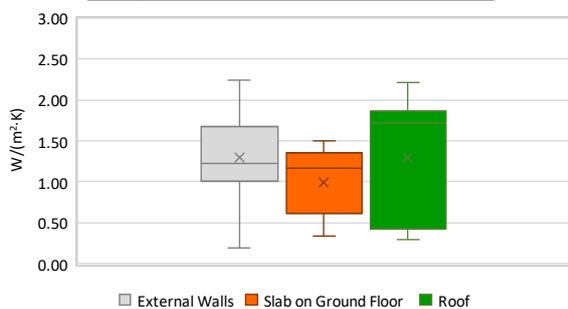
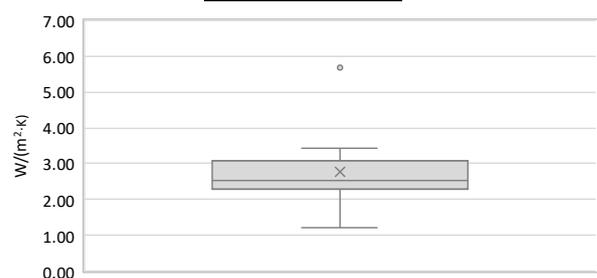


Region:	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)						Archetype code:		
Building category:	Non-residential buildings – Educational buildings						EDUC_1946-1981_E_VAL		
Period of construction:	1946-1981								
Climatic zone:	E	Number of records:		14					
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014):						Data sources:			
External walls: hollow brick masonry with thermal insulation (cod. MCV02). Roof slabs: reinforced concrete floor slab for non-walkable flat roof (cod. COP01) or for pitched roof (cod. CIN04).						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 <sup>2</sup>	-	-	-	-	-	
	Heated gross floor area	$A_{H,g}$	m <sup>2</sup>	-	-	-	-	-	
	Heated net floor area	$A_{H,n}$	m <sup>2</sup>	1476.6	1540.7	478.7	719.7	2024.4	
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	6852.2	7356.9	2377.4	3714.0	8353.7	
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	4982.7	5058.7	2131.4	2982.0	5762.8	
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.55	0.16	0.44	0.55	0.68	
	WWR – North orientation	$WWR_N$	-	0.21	0.08	0.14	0.21	0.26	
	WWR – South orientation	$WWR_S$	-	0.21	0.08	0.14	0.21	0.26	
	WWR – East orientation	$WWR_E$	-	0.21	0.08	0.14	0.21	0.26	
	WWR – West orientation	$WWR_W$	-	0.21	0.08	0.14	0.21	0.26	
	Window to useful floor area ratio	$A_{wi}/A_{use}$	-	0.18	0.07	0.17	0.20	0.22	
ENVELOPE	Roof type	-							
	U-value of the roof **	$U_{fi,up}$	W/(m <sup>2</sup> ·K)	1.30	0.81	0.42	1.73	1.86	
	External walls type	Hollow brick masonry: 50%; Masonry with local stones: 21%; Concrete wall: 14%; Solid Brick masonry: 14%; Unknown: 1%							
	U-value of the wall	$U_{wl}$	W/(m <sup>2</sup> ·K)	1.30	0.56	1.01	1.22	1.68	
	Slab on ground floor type	-							
	U-value of the floor **	$U_{fi,lw}$	W/(m <sup>2</sup> ·K)	0.99	0.47	0.61	1.17	1.35	
	Windows type	Double glazing, wooden frame: 100%							
	U-value of the windows	$U_W$	W/(m <sup>2</sup> ·K)	2.76	1.04	2.29	2.54	3.07	
Shading system type	-								
GAINS and VENTILATION	Occupancy density *	$O_c$	person/m <sup>2</sup>	UNI EN 16798-1 - Table A.19					
	Lighting power density *	$W_L$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3					
	Equipment power density *	$W_A$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3					
	Type of ventilation	-							
	Air exchange rate *	$n$	h <sup>-1</sup>	-	-	-	-	-	
THERMAL SYSTEMS	Heating system type	Autonomous: 100%							
	Heating generator	Boiler (unknown type): 86%; Traditional Boiler: 7%; Heat exchanger of district heating/cooling: 7%							
	Daily operating time of the heating system *	$t_H$	h	14.0	0.0	14.0	14.0	14.0	
	Energy carrier	Natural Gas: 86%; Gas Oil: 14%							
	Heating emission sub-system	-							
	Cooling system type	Absent: 100%							
	Daily operating time of the cooling system *	$t_C$	h	-	-	-	-	-	
	Cooling emission sub-system	-							
	DHW system type	Autonomous, detached from heating: 50%; Centralized, coupled with heating: 43%; Centralized, detached from heating: 7%							
	DHW generator	Unknown: 100%							
* 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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<b>Building category:</b>	Non-residential buildings – Educational buildings	
<b>Period of construction:</b>	1946-1981	
<b>Climatic zone:</b>	E	

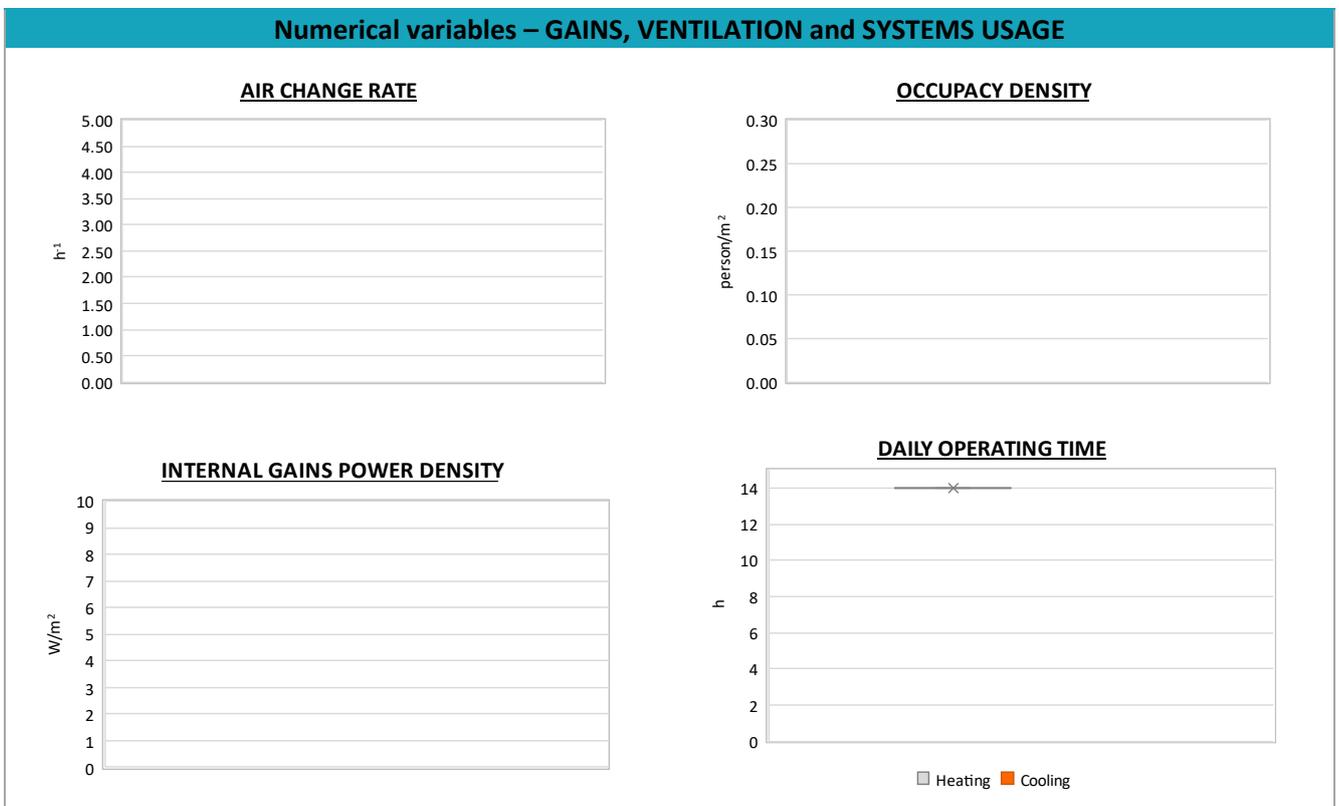
**Numerical variables – GEOMETRY**
**NUMBER OF FLOORS**

**GROSS HEIGHT**

**AREA**

**VOLUME**

**COMPACTNESS RATIO**

**WINDOWS TO WALL RATIO**

**Numerical variables – ENVELOPE**
**OPAQUE BUILDING COMPONENTS UVALUE**

**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.

<b>Region:</b>	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)		<b>Archetype code:</b> EDUC_1946-1981_E_VAL
<b>Building category:</b>	Non-residential buildings – Educational buildings		
<b>Period of construction:</b>	1946-1981		
<b>Climatic zone:</b>	E	<b>Number of records:</b> 14	

ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
<b>THERMAL SYSTEMS</b>	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	23.2	0.0	23.2	23.2	23.2
	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	-	-	-	-	-
	Temperature of DHW	$\vartheta_w$	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power	$P_{W,gen}$	kW	68.5	99.8	4.7	19.1	94.5
* This value refers to the building scale								



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<b>Building category:</b>	Non-residential buildings – Educational buildings	
<b>Period of construction:</b>	1946-1981	
<b>Climatic zone:</b>	E	

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