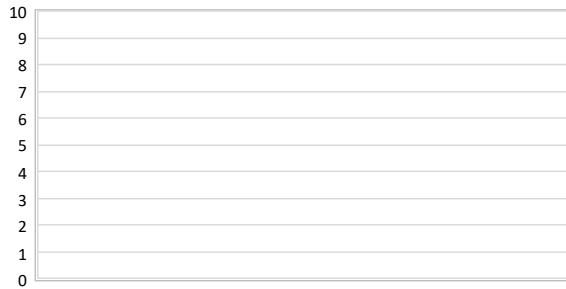


Region:	Piedmont						Archetype code: EDUC_1971-1980_E_PIE	
Building category:	Non-residential buildings – Educational buildings							
Period of construction:	1971-1980							
Climatic zone:	E	Number of records:				112		
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: hollow brick masonry with thermal insulation (cod. MCV02). Roof slabs: reinforced concrete floor slab for non-walkable flat roof (cod. COP01) or for pitched roof (cod. CIN04).							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 <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>	2977.0	3493.7	848.9	1503.9	3750.8
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	13558.7	15870.0	3405.3	7751.8	16890.8
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	-	-	-	-	-
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.52	0.18	0.38	0.49	0.69
	WWR – North orientation	$WWR_N$	-	-	-	-	-	-
	WWR – South orientation	$WWR_S$	-	-	-	-	-	-
	WWR – East orientation	$WWR_E$	-	-	-	-	-	-
	WWR – West orientation	$WWR_W$	-	-	-	-	-	-
	Window to useful floor area ratio	$A_{wi}/A_{\text{use}}$	-	0.20	0.07	0.15	0.20	0.23
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{f,up}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
	External walls type	Hollow brick masonry: 57%; Prefabricated panels: 24%; Solid Brick masonry: 11%; Unknown: 6%; Concrete wall: 2%						
	U-value of the wall	$U_{wl}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
	Slab on ground floor type	-						
	U-value of the floor	$U_{f,lw}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
	Windows type	-						
	U-value of the windows	$U_w$	W/(m <sup>2</sup> ·K)	3.44	1.38	2.50	3.32	4.56
GAINS and VENTILATION	Shading system type	-						
	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	-						
	Daily operating time of the heating system *	$t_H$	h	14.00	0.00	14.00	14.00	14.00
	Energy carrier	Natural Gas: 83%; Electricity: 10%; LPG: 2%; Solid biomass: 2%; Unknown: 2%; District heating: 1%						
	Heating emission sub-system	-						
	Cooling system type	-						
	Daily operating time of the cooling system *	$t_C$	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Autonomous, detached from heating: 51%; Centralized, coupled with heating: 38%; Centralized, detached from heating: 9%; Autonomous, coupled with heating: 2%						
	DHW generator	-						
* These values are derived from UNI EN ISO Standards								

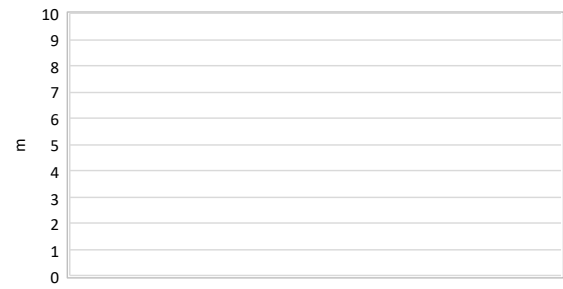
Region:	Piedmont			Archetype code: EDUC_1971-1980_E_PIE
Building category:	Non-residential buildings - Educational buildings			
Period of construction:	1971-1980			
Climatic zone:	E	Number of records:	112	

### Numerical variables – GEOMETRY

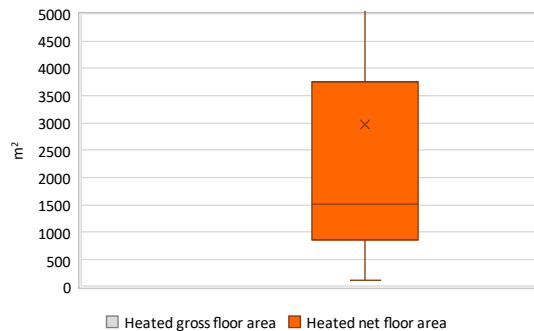
**NUMBER OF FLOORS**



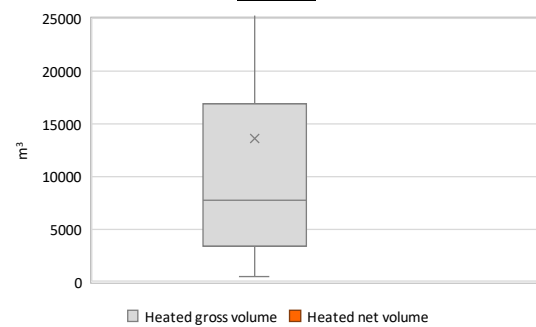
**GROSS HEIGHT**



**AREA**



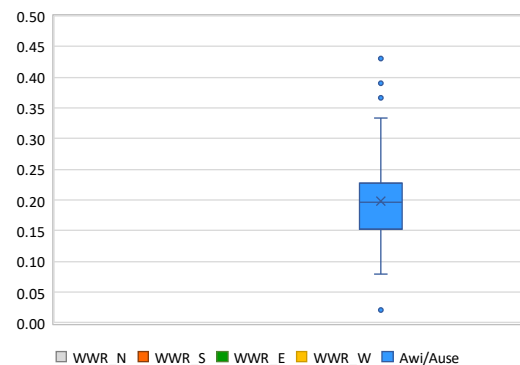
**VOLUME**



**COMPACTNESS RATIO**



**WINDOWS TO WALL RATIO**

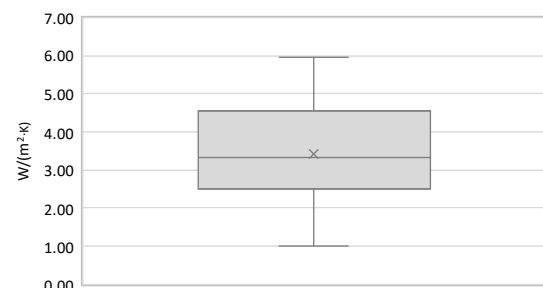


### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**



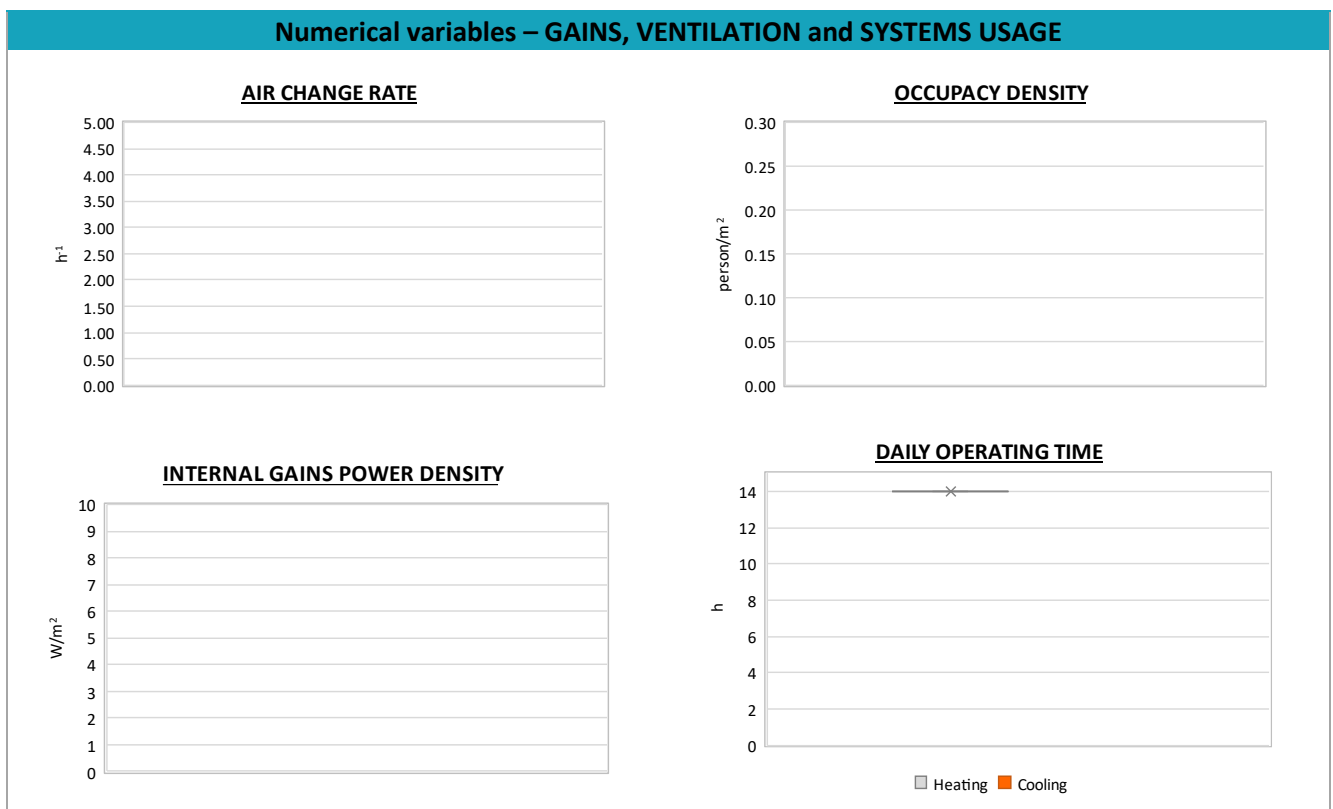
**WINDOWS U-VALUE**



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:	Piedmont	Archetype code: EDUC_1971-1980_E_PIE
Building category:	Non-residential buildings - Educational buildings	
Period of construction:	1971-1980	
Climatic zone:	E	
Number of records:		112

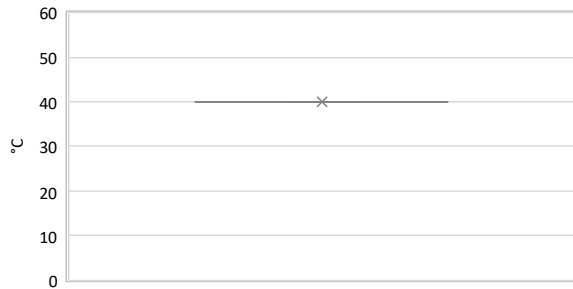
ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
THERMAL SYSTEMS	Heating efficiency or <i>COP</i>	$\eta_{H,gen}$ or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power	$P_{H,gen}$	kW	360.6	334.3	107.2	270.0	493.9
	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	2271.2	6355.4	16.0	27.0	41.3
	Temperature of DHW	$\vartheta_W$	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power	$P_{W,gen}$	kW	235.3	654.7	3.6	24.4	184.1



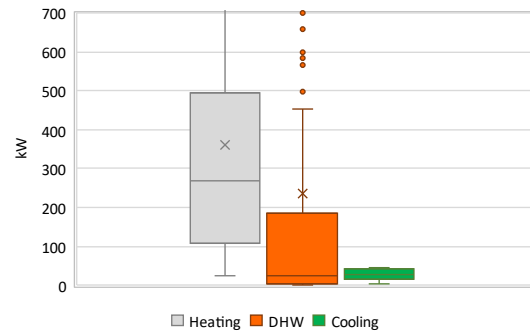
Region:	Piedmont	Archetype code: EDUC_1971-1980_E_PIE
Building category:	Non-residential buildings - Educational buildings	
Period of construction:	1971-1980	
Climatic zone:	E	
Number of records:		112

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

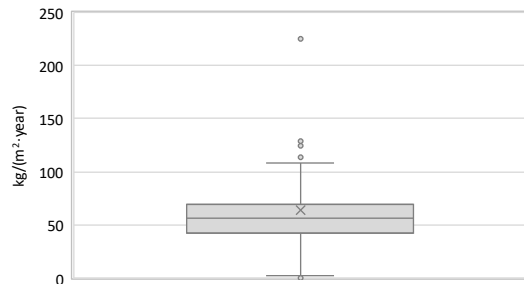
**DHW SUPPLY TEMPERATURE**



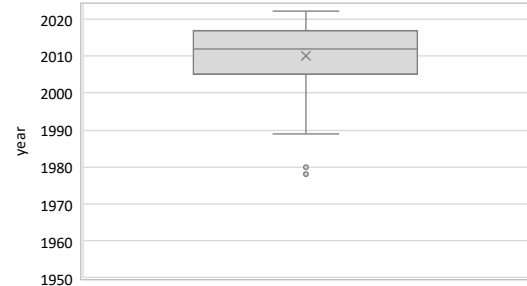
**SYSTEM POWER**



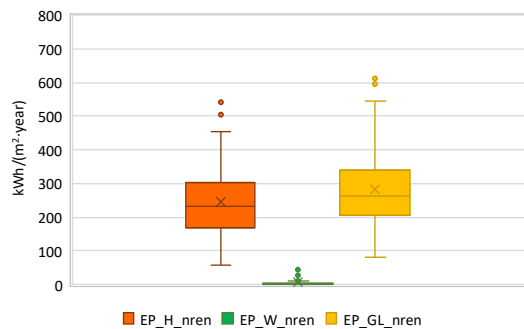
**CO<sub>2</sub> EMISSION**



**HEATING SYSTEM INSTALLATION YEAR**



**NON-RENEWABLE PRIMARY ENERGY USE**



**RENEWABLE PRIMARY ENERGY USE**

