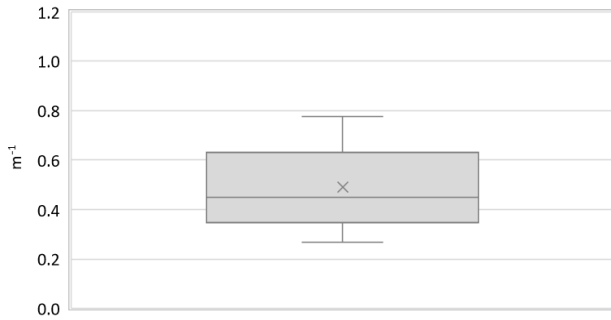


Region:	Trentino Alto Adige						Archetype code: EDUC_1981-1990_E_TN	
Building category:	Educational buildings							
Period of construction:	1981-1990							
Climatic zone:	E	Number of records:		39				
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: no data available Roof slabs: no data available							Data sources: APE (100%)	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
69503	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>	3061	3583	653	2024	3921
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	14138	16742	3014	7366	19462
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.55	0.16	0.40	0.57	0.67
	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	$A_{wi}/A_{\text{use}}$	-	-	-	-	-	-
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fi,up}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
	External walls type	-						
	U-value of the wall	$U_{wi}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
	Slab on ground floor type	-						
	U-value of the floor	$U_{fi,lw}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
	Windows type	-						
	U-value of the windows	$U_W$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
	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	Natural: 100%						
	Air exchange rate *	$n$	h <sup>-1</sup>	UNI EN 16798-1				
THERMAL SYSTEMS	Heating system type	Centralized: 41%, Unknown: 41%, Autonomous: 18%						
	Heating generator	Boiler (unknown type): 59%, Condensing boiler: 26%, Traditional boiler: 10%, DHC: 5%						
	Daily operating time of the heating system *	$t_H$	h	14	-	14	14	14
	Energy carrier	Natural gas: 90%, Gas Oil: 7%, District heating: 3%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 84%, Air-cooled chiller: 13%, Water-cooled chiller: 3%						
	Daily operating time of the cooling system *	$t_C$	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Centralized – coupled with heating: 36%, Autonomous – coupled with heating: 28%, Unknown: 16%, Autonomous - detached from heating: 15%, District heating: 5%						
	DHW generator	Natural gas boiler:68%, Electric boiler: 16%, Unknown: 16%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

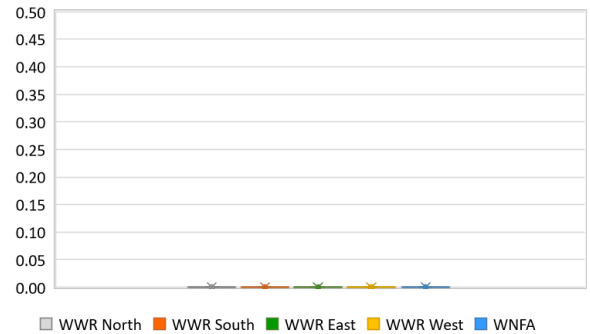
Region:	Trentino Alto Adige	Archetype code: EDUC_1981-1990_E_TN
Building category:	Educational buildings	
Period of construction:	1981-1990	
Climatic zone:	E	
Number of records:		39

### Numerical variables – GEOMETRY

**COMPACTNESS RATIO**

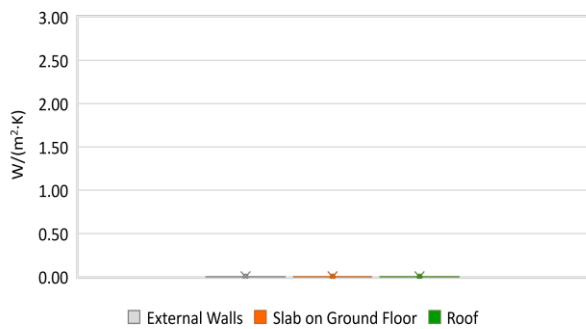


**WINDOWS TO WALL RATIO**



### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**

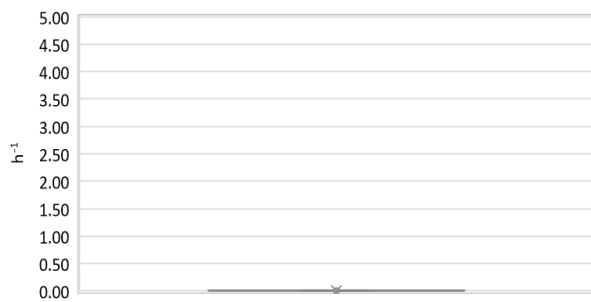


**WINDOWS U-VALUE**



### Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

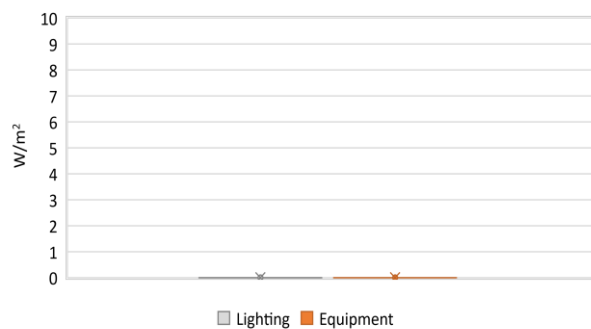
**AIR EXCHANGE RATE**



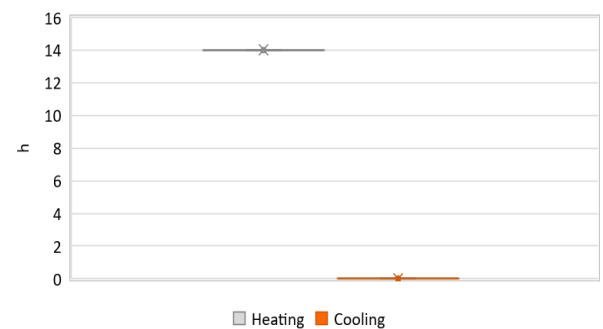
**OCCUPANCY DENSITY**



**INTERNAL GAINS POWER DENSITY**



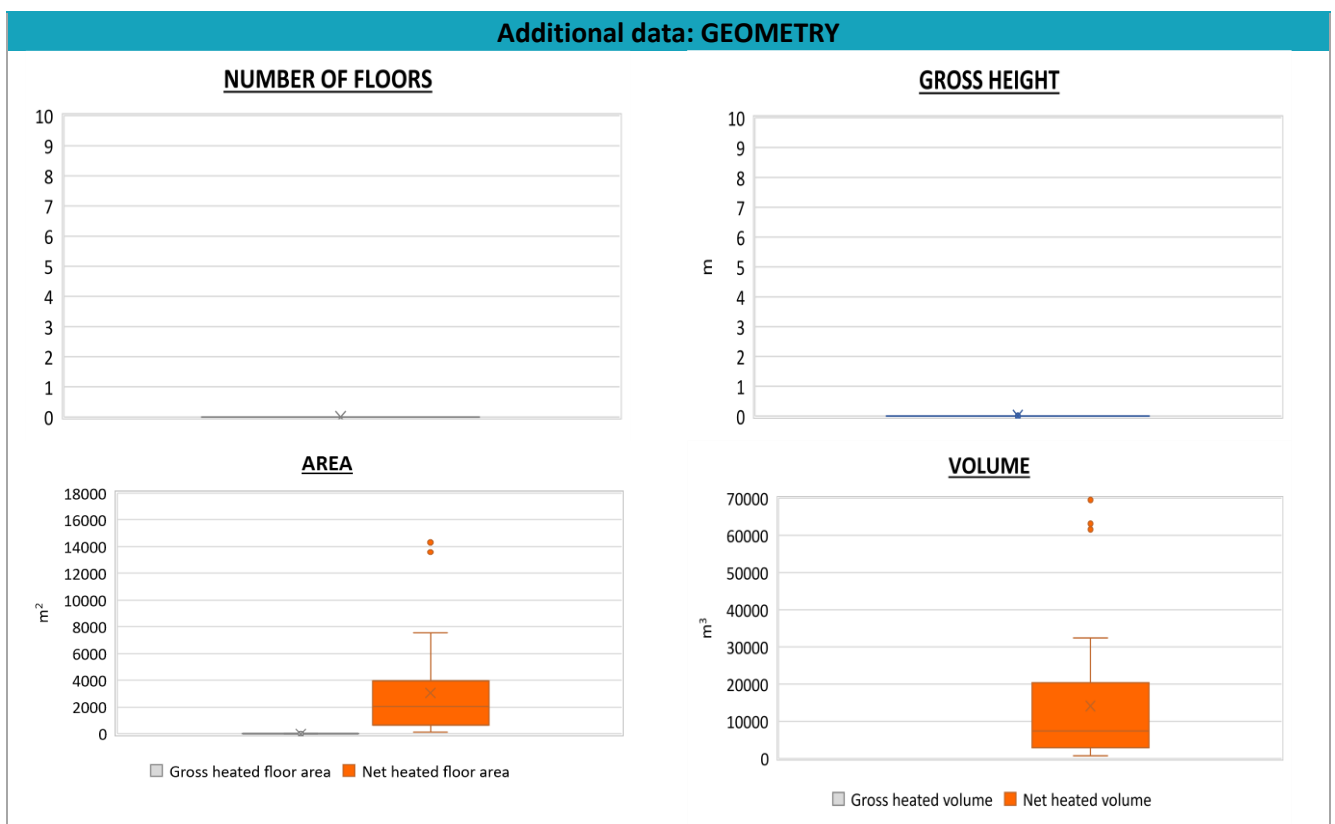
**DAILY OPERATING TIME**



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:	Trentino Alto Adige			Archetype code: EDUC_1981-1990_E_TN
Building category:	Educational buildings			
Period of construction:	1981-1990			
Climatic zone:	E	Number of records:	39	

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	240	320	46	150	313
	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	448	392	48	550	748
	Temperature of DHW	$\vartheta_W$	°C	40	-	40	40	40
	DHW system power	$P_{W,gen}$	kW	240	319	46	150	312



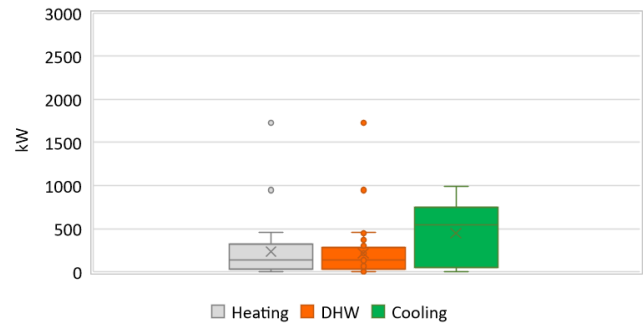
Region:	Trentino Alto Adige	Archetype code: EDUC_1981-1990_E_TN
Building category:	Educational buildings	
Period of construction:	1981-1990	
Climatic zone:	E	
Number of records:		19

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

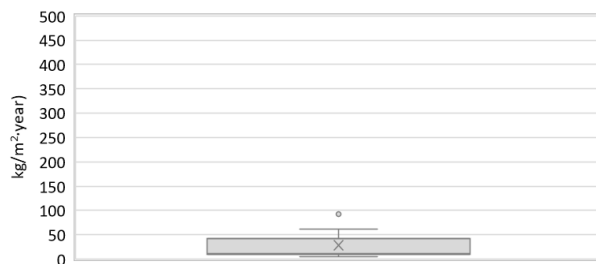
**DHW SUPPLY TEMPERATURE**



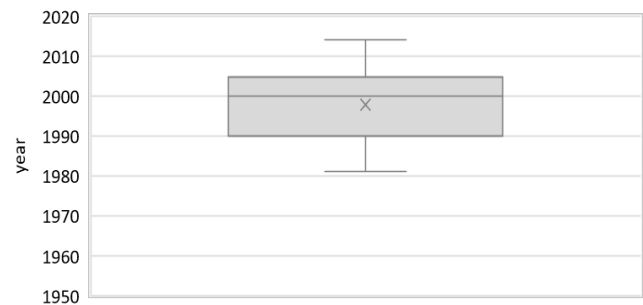
**SYSTEM POWER**



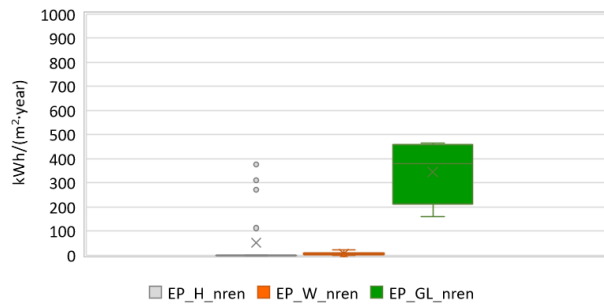
**CO<sub>2</sub> EMISSION**



**HEATING SYSTEM INSTALLATION YEAR**



**NON-RENEWABLE PRIMARY ENERGY USE**



**RENEWABLE PRIMARY ENERGY USE**

