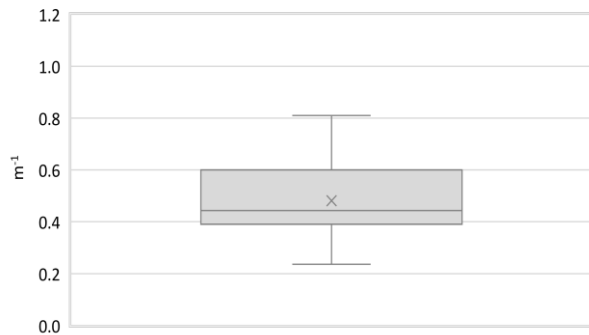


Region:	Trentino Alto Adige						Archetype code: EDUC_2001-2010_E_TN	
Commercial buildings	Educational buildings							
Period of construction:	2001-2010							
Climatic zone:	E	Number of records:				39		
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 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)
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>	2460	3146	588	1658	2612
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	11117	12972	2754	6535	11444
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.48	0.13	0.39	0.44	0.60
	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: 39%, Unknown: 38%, Autonomous: 23%						
	Heating generator	Boiler (Unknown type): 62%, Condensing boiler: 26%, Traditional boiler: 7%, DHC: 5%						
	Daily operating time of the heating system *	$t_H$	h	14	0	14	14	14
	Energy carrier	Natural gas: 97%, Gas Oil: 3%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 82%, Air-cooled chiller: 18%						
	Daily operating time of the cooling system *	$t_C$	h	0	0	0	0	0
	Cooling emission sub-system	-						
	DHW system type	Autonomous – coupled with heating: 39%, Centralized – coupled with heating: 31%, Unknown: 17%, Autonomous - detached from heating: 8%, District heating: 5%						
	DHW generator	Natural gas boiler: 73%, Unknown: 18%, Electric boiler: 3%, Electric heat pump: 3%, Solar thermal: 3%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

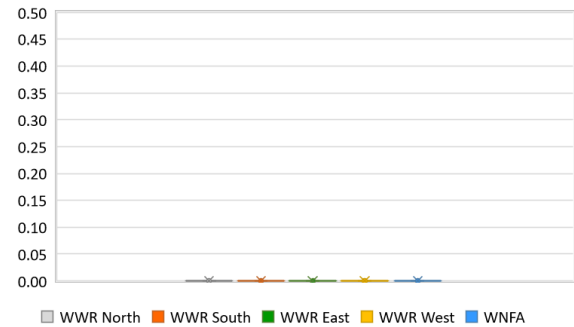
<b>Region:</b>	Trentino Alto Adige	<b>Archetype code:</b> EDUC_2001-2010_E_TN
<b>Building category:</b>	Educational buildings	
<b>Period of construction:</b>	2001-2010	
<b>Climatic zone:</b>	E	
<b>Number of records:</b>		39

### Numerical variables – GEOMETRY

**COMPACTNESS RATIO**

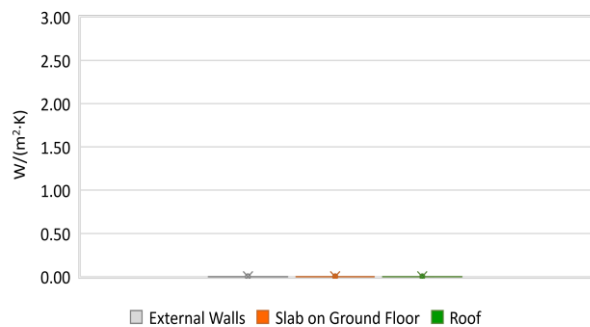


**WINDOWS TO WALL RATIO**

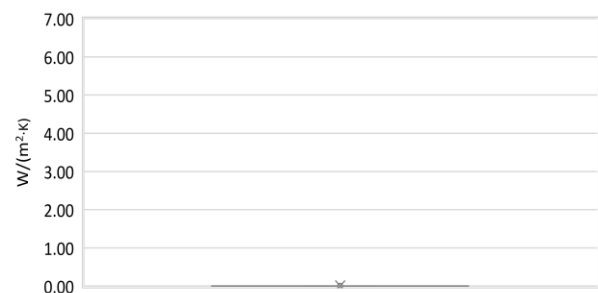


### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**

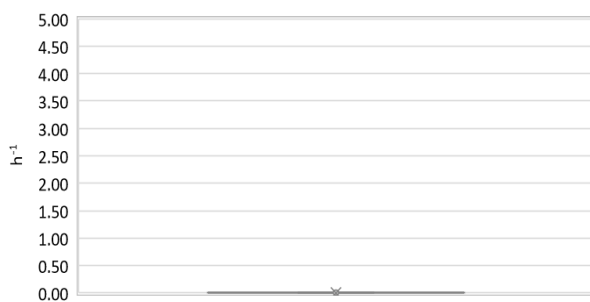


**WINDOWS U-VALUE**



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

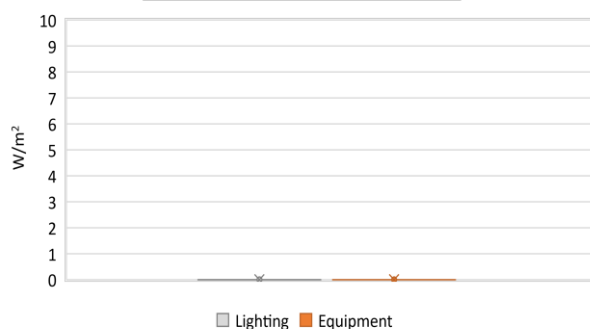
**AIR EXCHANGE RATE**



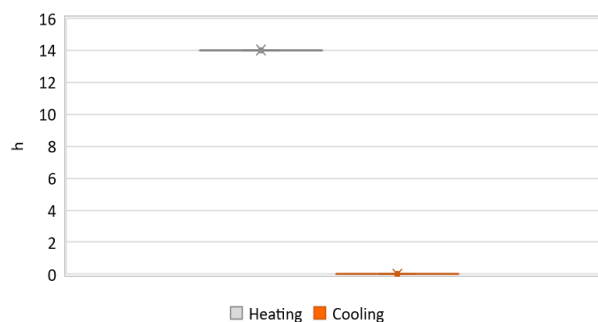
**OCCUPANCY DENSITY**



**INTERNAL GAINS POWER DENSITY**



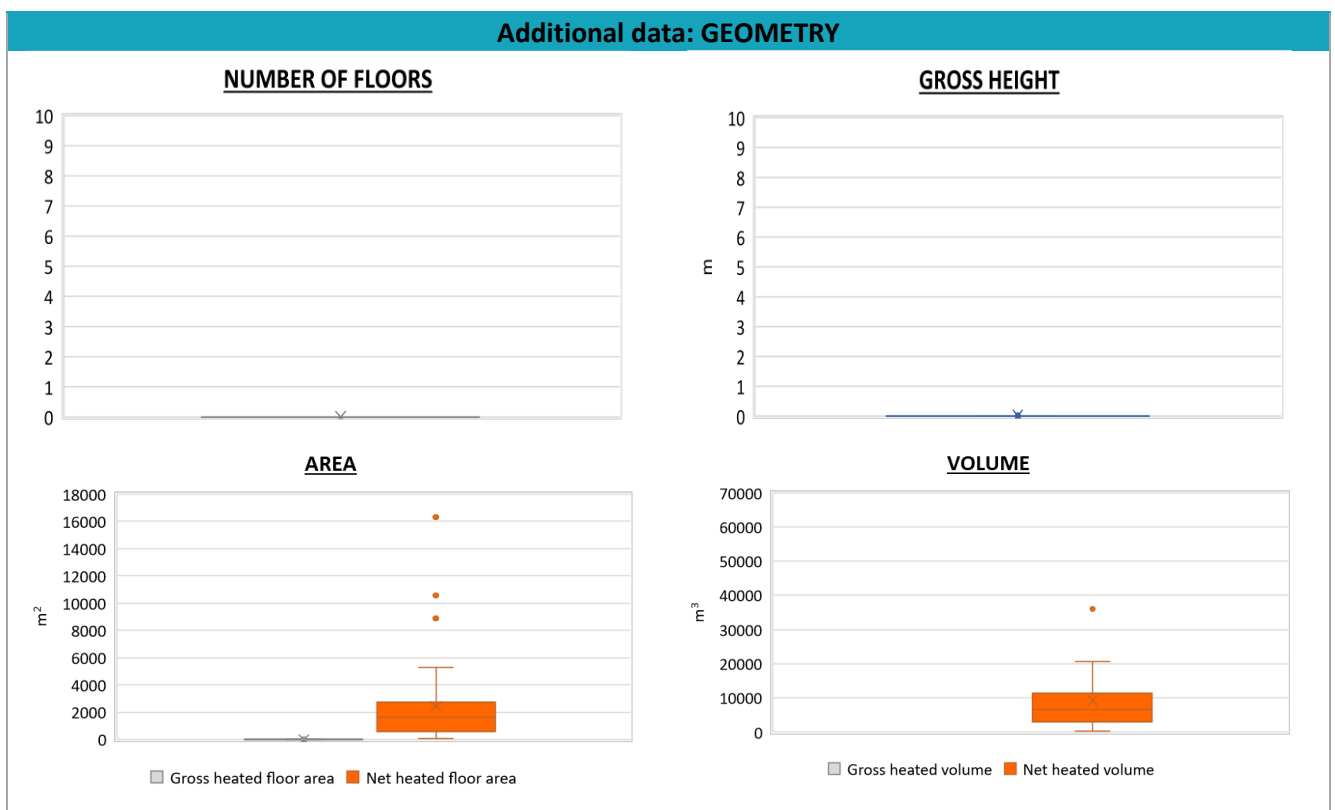
**DAILY OPERATING TIME**



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_2001-2010_E_TN
Building category:	Educational buildings			
Period of construction:	2001-2010			
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	597	1700	117	235	330
	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	1110	1184	132	910	1570
	Temperature of DHW	$\vartheta_W$	°C	40	-	40	40	40
	DHW system power	$P_{W,gen}$	kW	285	358	85	230	298



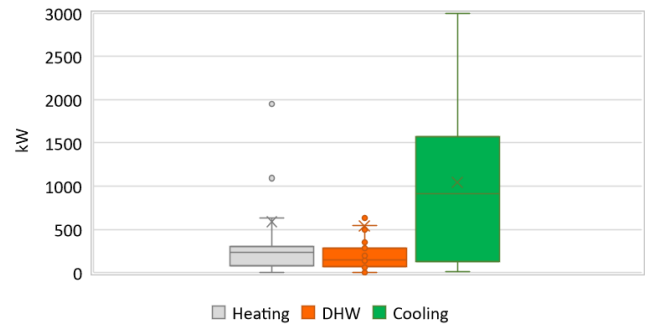
<b>Region:</b>	Trentino Alto Adige	<b>Archetype code:</b> EDUC_2001-2010_E_TN
<b>Building category:</b>	Educational buildings	
<b>Period of construction:</b>	2001-2010	
<b>Climatic zone:</b>	E	
<b>Number of records:</b>		39

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

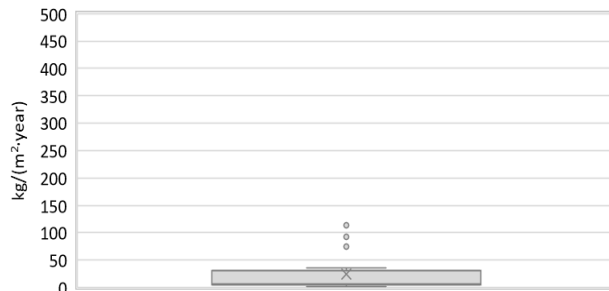
**DHW SUPPLY TEMPERATURE**



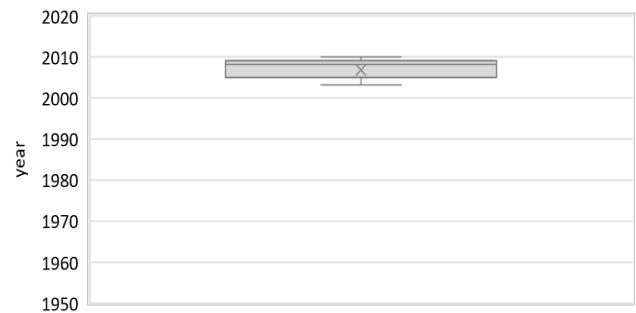
**SYSTEM POWER**



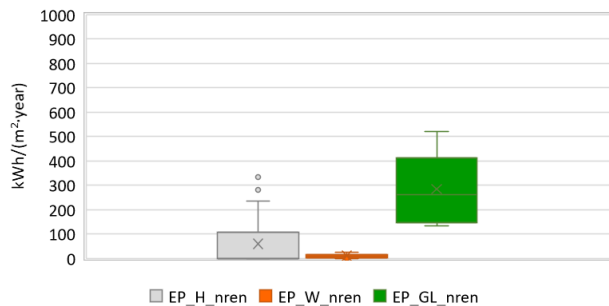
**CO2 EMISSION**



**HEATING SYSTEM INSTALLATION YEAR**



**NON-RENEWABLE PRIMARY ENERGY USE**



**RENEWABLE PRIMARY ENERGY USE**

