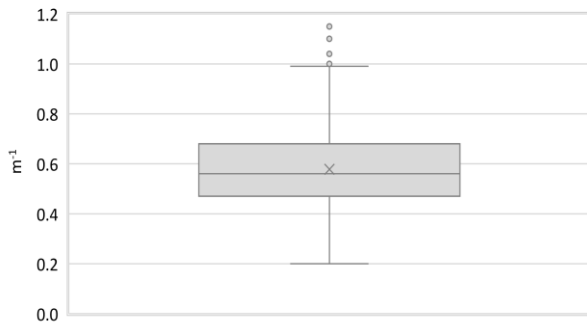


Region:	Trentino Alto Adige						Archetype code: COMM_-1930_E_TN	
Building category:	Commercial buildings							
Period of construction:	<1930							
Climatic zone:	E	Number of records:				523		
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): 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>	123	132	86	126	1941
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	576	611	30	411	600
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.58	0.17	0.47	0.56	0.68
	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		$U_{wl}$	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)	-	-	-	-	-
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	Natural: 100%						
THERMAL SYSTEMS	Air exchange rate *	$n$	h <sup>-1</sup>	UNI EN 16798-1				
	Heating system type	Unknown: 53%, Autonomous: 36%, Centralized: 11%						
	Heating generator	Boiler (Unknown): 40%, Traditional boiler: 22%, Air source heat pump: 20%, District heating: 10%, Condensing boiler: 8%						
	Daily operating time of the heating system *	$t_H$	h	14	-	14	14	14
	Energy carrier	Natural gas: 87%, Electricity: 9%, Solid biomass: 2%, District heating: 1%, Gas Oil: 1%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 91%, Absorption chiller: 8%, Water-cooled chiller: 1%						
	Daily operating time of the cooling system *	$t_C$	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Unknown: 40%, Autonomous - coupled with heating: 28%, Autonomous - detached from heating: 26%, Centralized – coupled with heating: 5%, DHC: 1%						
	DHW generator	Unknown: 41%, Natural gas boiler: 33%, Electric Heat Pump: 17%, Electric boiler: 9%						
* These values were not available in the considered sources, and are thus derived from NI EN Standards								

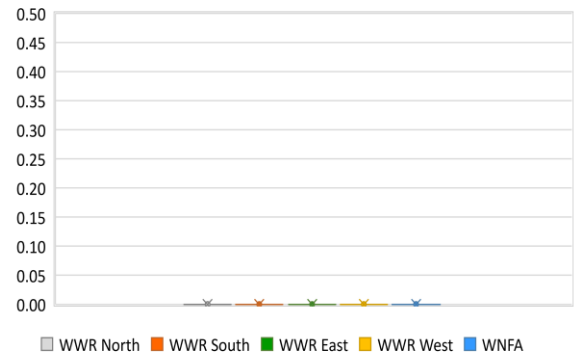
<b>Region:</b>	Trentino Alto Adige	<b>Archetype code:</b> COMM_-1930_E_TN
<b>Building category:</b>	Commercial buildings	
<b>Period of construction:</b>	<1930	
<b>Climatic zone:</b>	E	
<b>Number of records:</b> 523		

### Numerical variables – GEOMETRY

**COMPACTNESS RATIO**

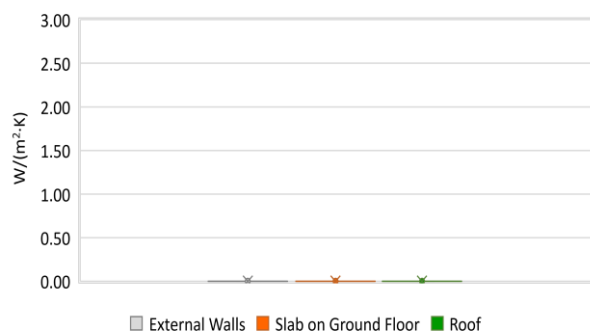


**WINDOWS TO WALL RATIO**



### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**

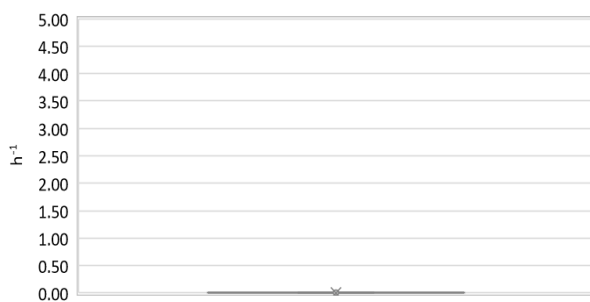


**WINDOWS U-VALUE**

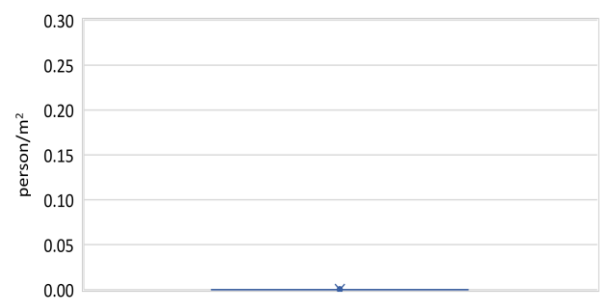


### Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

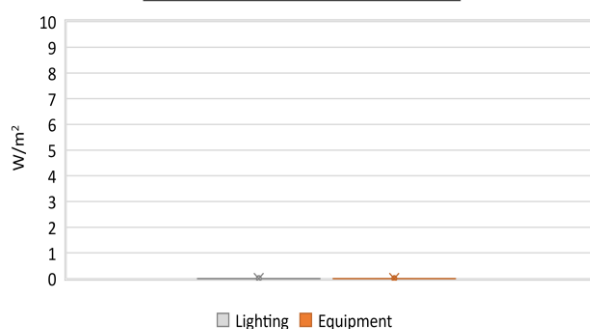
**AIR EXCHANGE RATE**



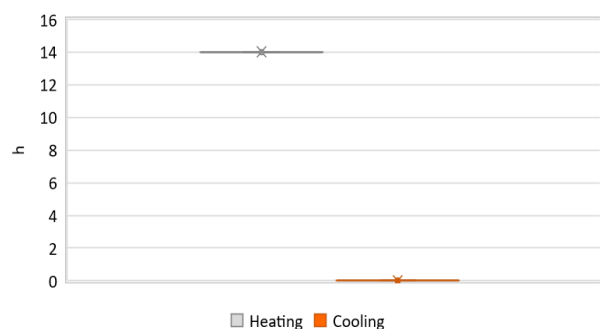
**OCCUPANCY DENSITY**



**INTERNAL GAINS POWER DENSITY**



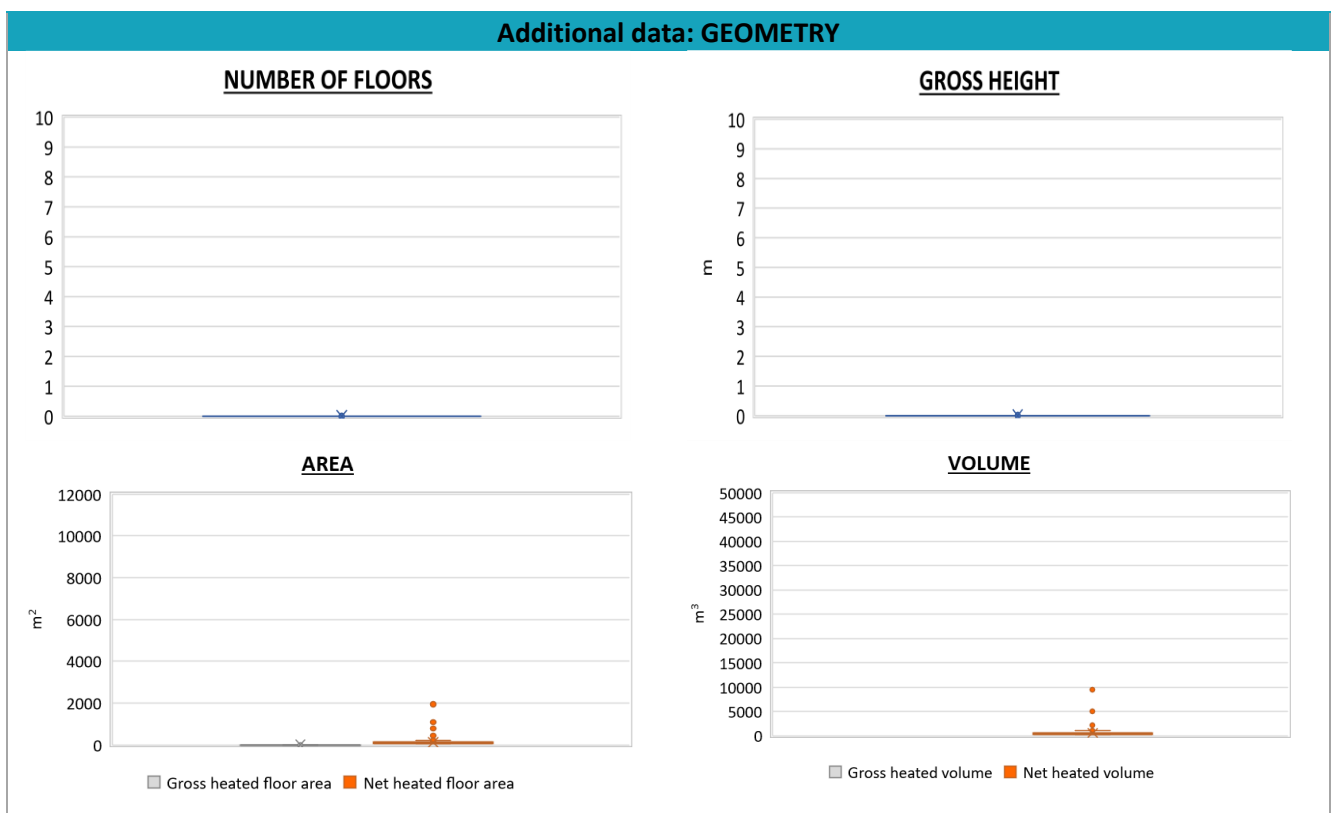
**DAILY OPERATING TIME**



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: COMM_-1930_E_TN
Building category:	Commercial buildings	
Period of construction:	<1930	
Climatic zone:	E	
Number of records:		523

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	40	67	24	26	30
	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	19	31	5	8	20
	Temperature of DHW	$\vartheta_W$	°C	40	-	40	40	40
	DHW system power	$P_{W,gen}$	kW	-	-	-	-	-



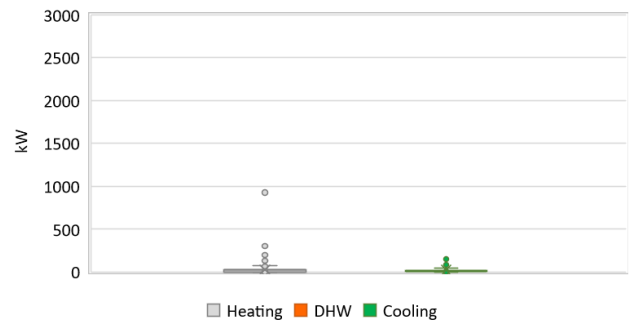
<b>Region:</b>	Trentino Alto Adige	<b>Archetype code:</b> COMM_-1930_E_TN
<b>Building category:</b>	Commercial buildings	
<b>Period of construction:</b>	<1930	
<b>Climatic zone:</b>	E	
<b>Number of records:</b> 523		

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

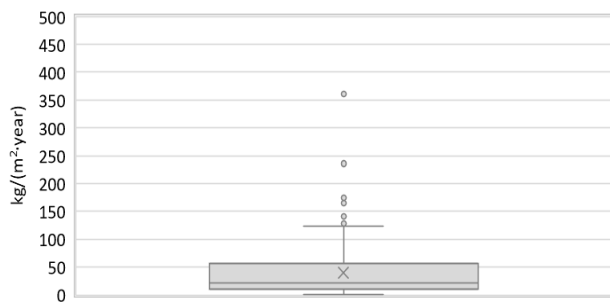
**DHW SUPPLY TEMPERATURE**



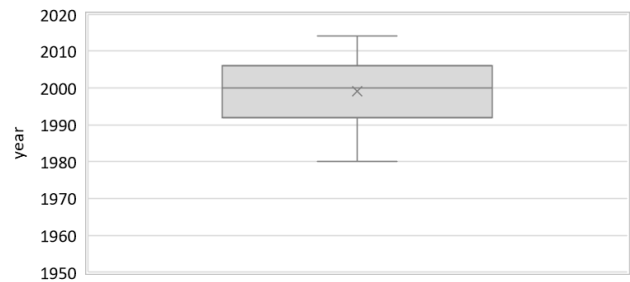
**SYSTEM POWER**



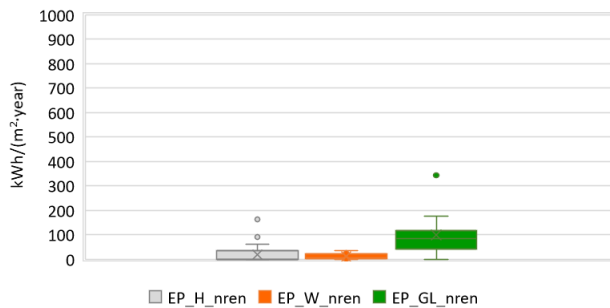
**CO<sub>2</sub> EMISSION**



**HEATING SYSTEM INSTALLATION YEAR**



**NON-RENEWABLE PRIMARY ENERGY USE**



**RENEWABLE PRIMARY ENERGY USE**

