

Region:		Trentino					Archetype code:		
Building category:		Commercial					COMM_		
Period of construction:		1961-1970					1961-1970_F_TN		
Climatic zone:		F	Number of records:		208				
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014):							Data sources:		
External walls: no data available							EPC databases (100%)		
Roof slabs: no data available									
	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>	142	144	71	97	156	
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-	
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	587	675	293	381	607	
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.65	0.17	0.52	0.65	0.77	
	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	$U_{\text{fl,up}}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-	
	External walls type	-							
	U-value of the wall	$U_{\text{wl}}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-	
	Slab on ground floor type	-							
	U-value of the floor	$U_{\text{fl,lw}}$	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					
	Lighting power density *	$W_L$	W/m <sup>2</sup>	UNI EN 16798-1					
	Equipment power density *	$W_A$	W/m <sup>2</sup>	UNI EN 16798-1					
	Type of ventilation	Natural: 100%							
	Air exchange rate *	$n$	h <sup>-1</sup>	UNI EN 16798-1					
THERMAL SYSTEMS	Heating system type	Unknown 42%; Centralized: 38%; Autonomous: 20%							
	Heating generator	Boiler (unknown type): 95%; Air-source heat pump: 5%							
	Daily operating time of the heating system *	$t_H$	h	No limitation					
	Energy carrier	Electricity: 50%; District heating: 44%; Electricity from PV, wind turbines, hydraulic turbines: 6%							
	Heating emission sub-system	-							
	Cooling system type	Unknown: 98%; Air-cooled chiller: 2%							
	Daily operating time of the cooling system *	$t_C$	h	No limitation					
	Cooling emission sub-system	-							
	DHW system type	Unknown: 32%; Autonomous - detached from heating: 24%; Autonomous – coupled with heating: 19%; Centralized – coupled with heating: 15%; District heating: 10%							
	DHW generator	Natural gas boiler: 36%; Unknown 34%; Electric Heat Pump: 21%; Electric boiler: 9%							

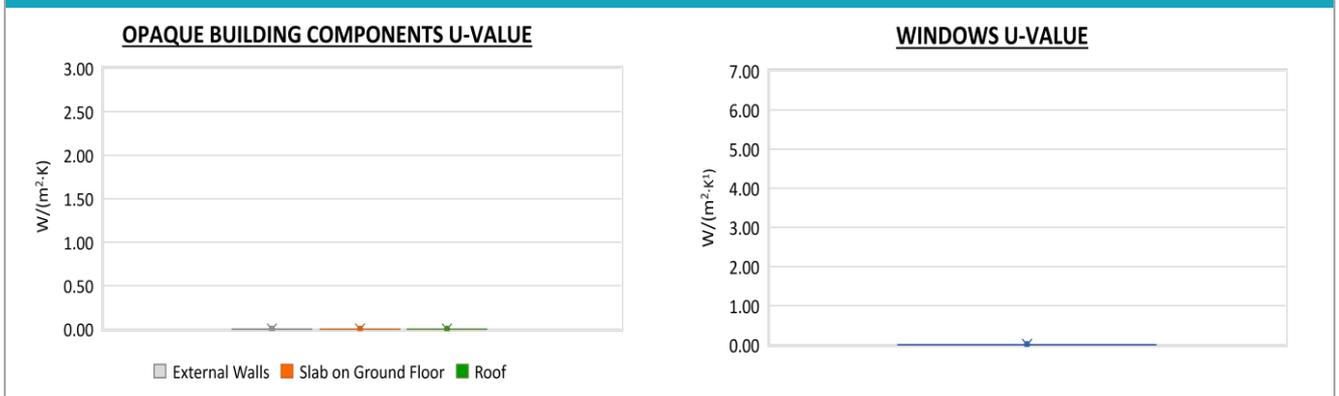
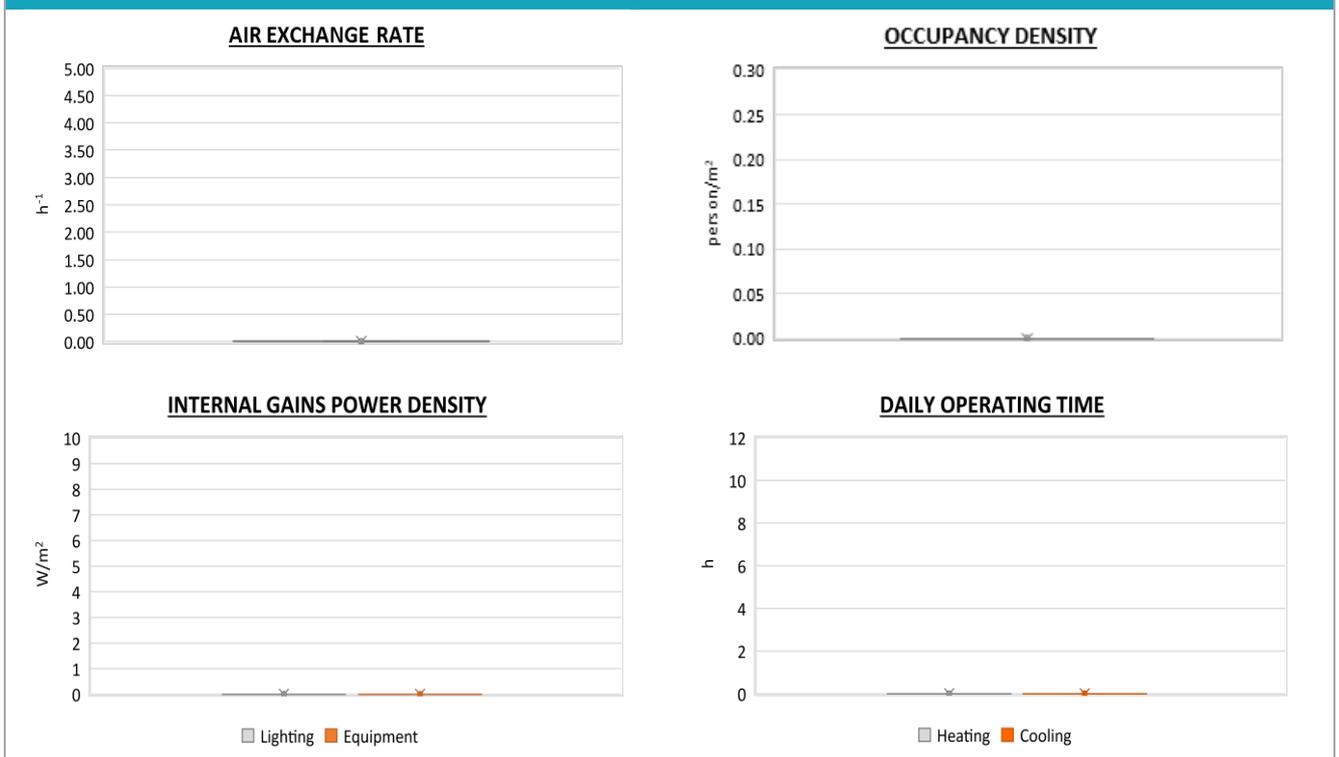
\* These values were not available in the considered sources, and are thus derived from UNI EN Standards



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.

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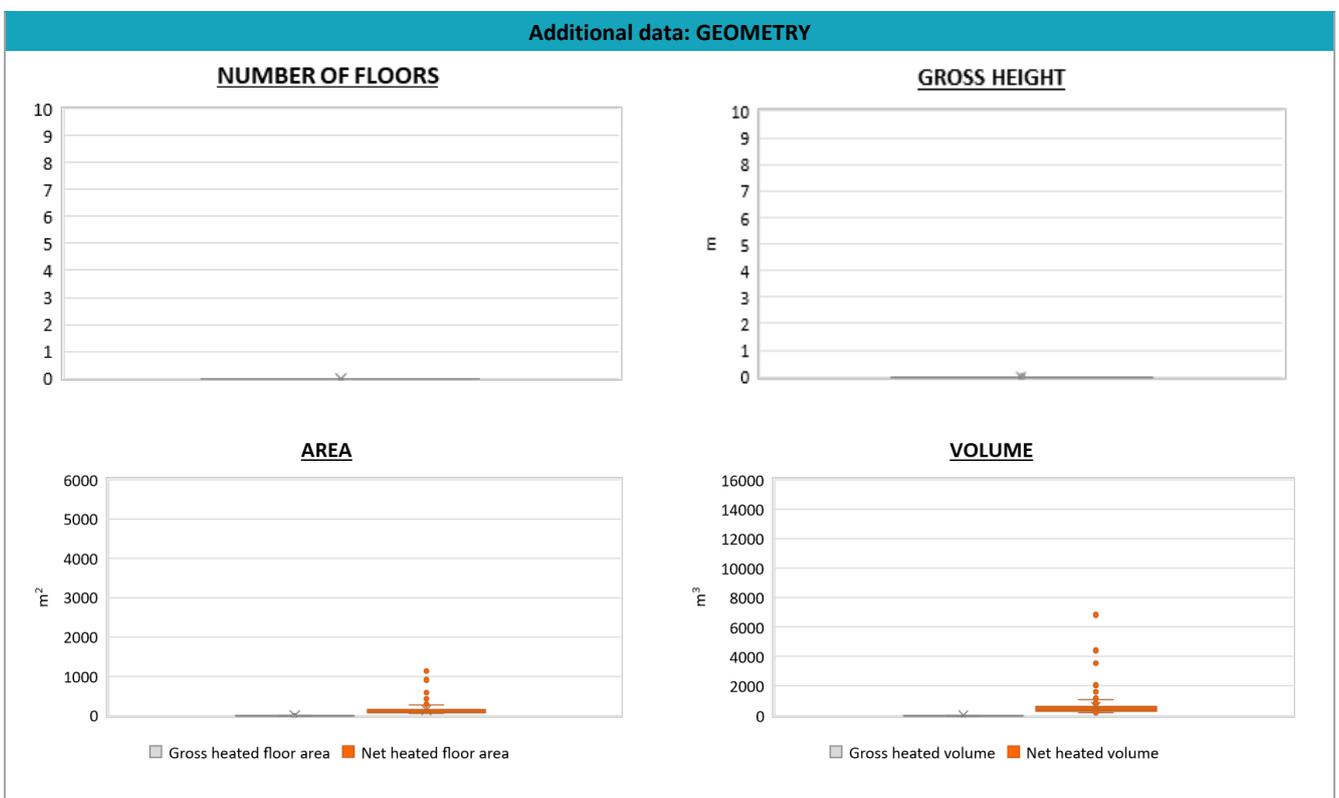
**Numerical variables – GEOMETRY**

**Numerical variables – ENVELOPE**

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


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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	116	363	24	34	100
	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	6	2	6	7	7
	Temperature of DHW	$\vartheta_W$	°C	-	-	-	-	-
	DHW system power *	$P_{W,gen}$	kW	64	134	2	27	52



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