

Region:		Trentino Alto Adige					Archetype code:		
Building category:		Office buildings					OFF_2001-2010_E_TN		
Period of construction:		2001-2010							
Climatic zone:		E	Number of records:		279				
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							APE (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>	464	980	91	143	320	
	Heated gross volume	$V_{H;g}$	m <sup>3</sup>	-	-	-	-	-	
	Heated net volume	$V_{H;n}$	m <sup>3</sup>	1876	3857	369	569	1350	
	Compactness ratio	$A_{\text{env}}/V_{H;g}$	m <sup>-1</sup>	0.54	0.21	0.38	0.52	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)	-	-	-	-	-	
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	Unknown: 76%, Autonomous: 14%, Centralized: 10%							
	Heating generator	Traditional boiler: 32%, Condensing boiler: 28%, Boiler (Unknown type): 22%, Air source heat pump: 10%, DHC: 4%, Unknown: 3%, Water-source heat pump: 1%							
	Daily operating time of the heating system *	$t_H$	h	14	-	14	14	14	
	Energy carrier	Natural gas: 84%, Electricity: 10%, District heating: 4%, Gas Oil: 1%, Solid biomass: 1%							
	Heating emission sub-system	-							
	Cooling system type	Unknown: 71%, Air-cooled chiller: 27%, Water-cooled chiller: 2%							
	Daily operating time of the cooling system *	$t_c$	h	-	-	-	-	-	
	Cooling emission sub-system	-							
	DHW system type	Autonomous - detached from heating: 34%, Unknown: 33%, Autonomous – coupled with heating: 27%, Centralized – coupled with heating: 4%, District heating: 2%							
	DHW generator	Unknown: 33%, Natural gas boiler: 32%, Electric boiler: 24%, Electric heat pump: 11%							

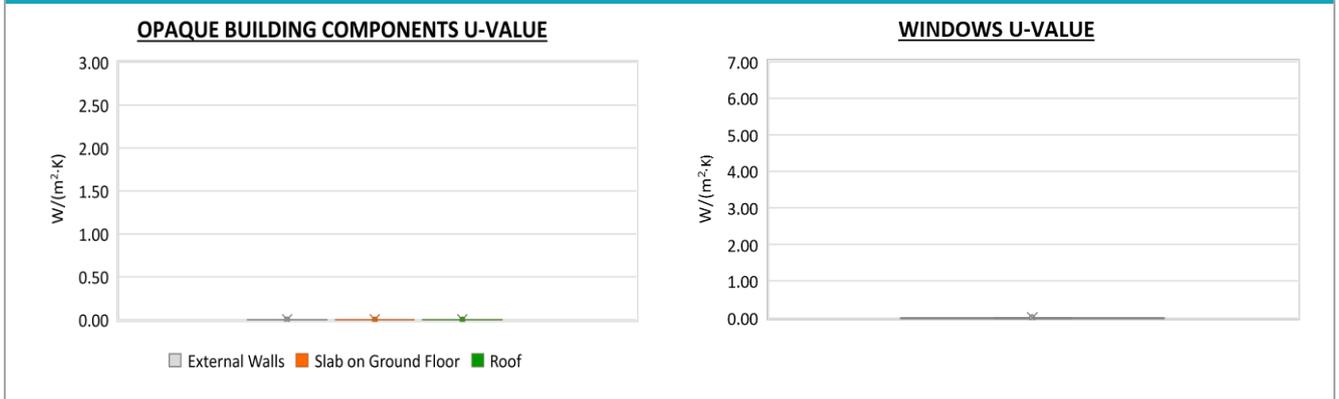
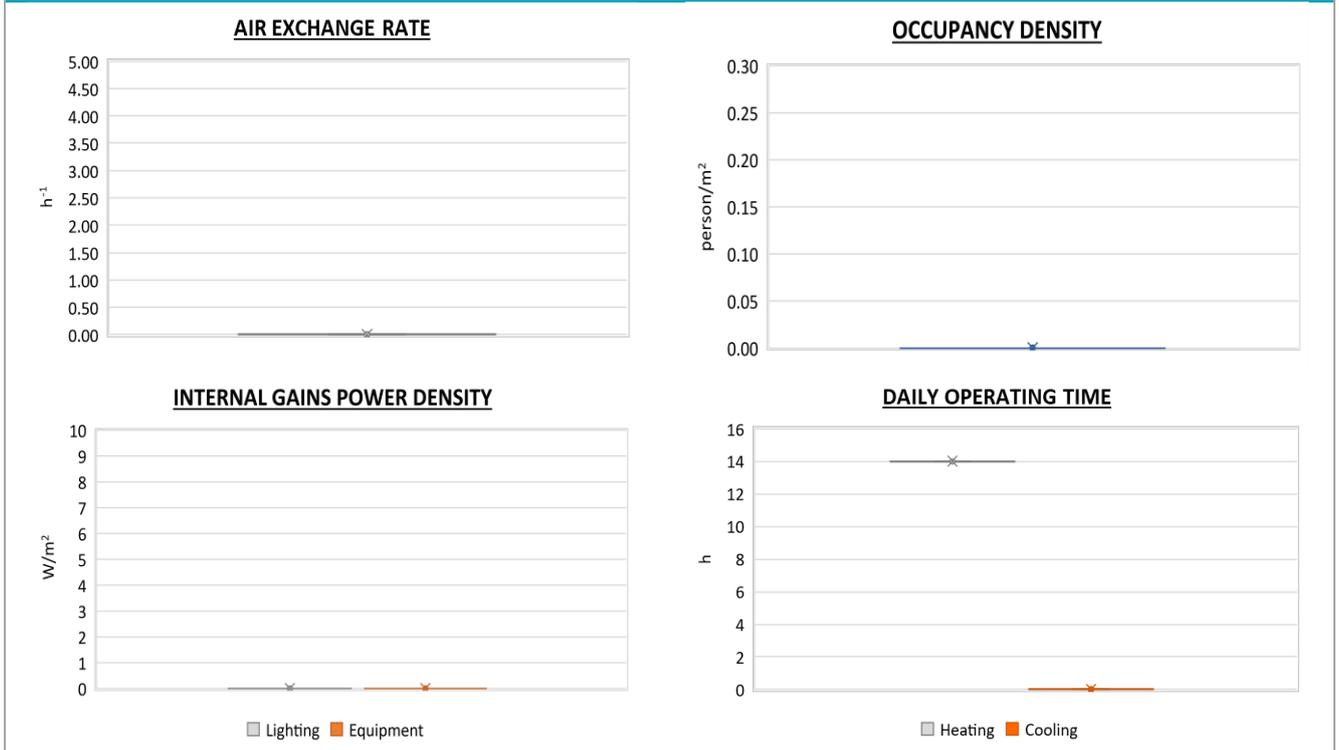
\* These values were not available in the considered sources, and are thus derived from UNI EN Standards



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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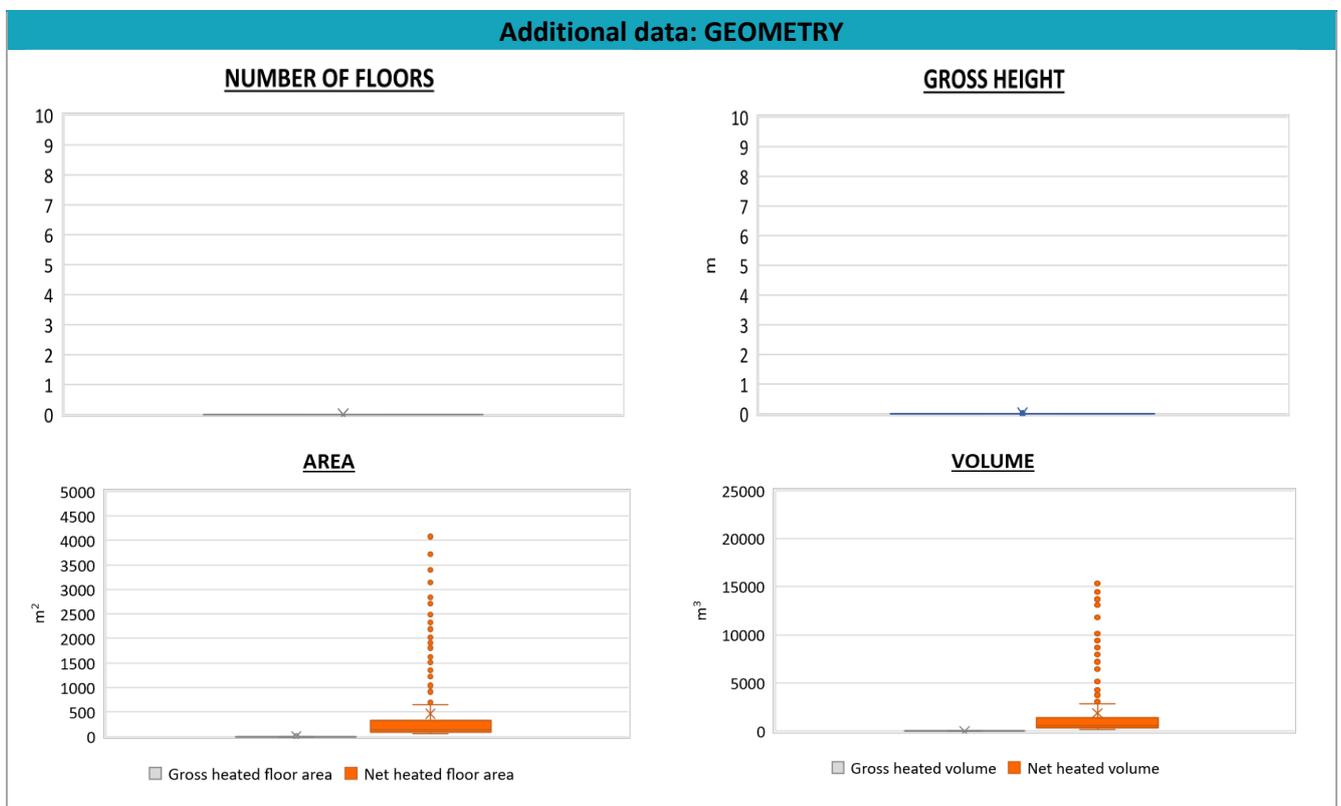
**Numerical variables – GEOMETRY**

**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	53	139	2	24	34
	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	135	133	18	89	250
	Temperature of DHW	$\vartheta_w$	°C	40	-	40	40	40
	DHW system power	$P_{W;gen}$	kW	-	-	-	-	-



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