

Region:	Trentino		Archetype code: RES_APPBLOCK_2011-F_TN					
Building category:	Residential multifamily buildings							
Period of construction:	>2011							
Climatic zone:	F	Number of records: 2419						
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: EPC databases (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 ²	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	543	278	372	459	590
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m ³	2188	1248	1486	1794	2347
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.59	0.11	0.53	0.58	0.64
	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_{use}	-	-	-	-	-	-
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fi,up}$	W/(m ² ·K)	-	-	-	-	-
	External walls type	-						
	U-value of the wall	U_{wi}	W/(m ² ·K)	-	-	-	-	-
	Slab on ground floor type	-						
	U-value of the floor	$U_{fi,lw}$	W/(m ² ·K)	-	-	-	-	-
	Windows type	-						
	U-value of the windows	U_{w}	W/(m ² ·K)	-	-	-	-	-
Shading system type	-							
GAINS and VENTILATION	Occupancy density *	O_c	person/m ²	UNI EN 16798-1 - Table A.19				
	Lighting power density *	W_L	W/m ²	UNI EN 16798-1 - A.8.3				
	Equipment power density *	W_A	W/m ²	UNI EN 16798-1 - A.8.3				
	Type of ventilation	Natural: 100%						
	Air exchange rate *	n	h ⁻¹	0.3	-	0.3	0.3	0.3
THERMAL SYSTEMS	Heating system type	Autonomous: 48%; Centralized: 29%; Unknown 23%						
	Heating generator	Boiler (unknown type): 93%; Fireplace: 4%; Air-source heat pump: 3%						
	Daily operating time of the heating system *	t_H	h	No limitation				
	Energy carrier	Electricity: 62%; Electricity from PV, wind turbines, hydraulic turbines: 28%; District heating: 10%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 99%; Air-cooled chiller: 1%						
	Daily operating time of the cooling system *	t_C	h	No limitation				
	Cooling emission sub-system	-						
	DHW system type	Autonomous – coupled with heating: 50%; Centralized – coupled with heating: 25%; Autonomous - detached from heating: 14%; Unknown: 9%; District heating: 2%						
	DHW generator	Natural gas boiler: 79%; Electric Heat Pump: 10%; Unknown 6%; Solar thermal: 4%; Electric boiler: 1%						

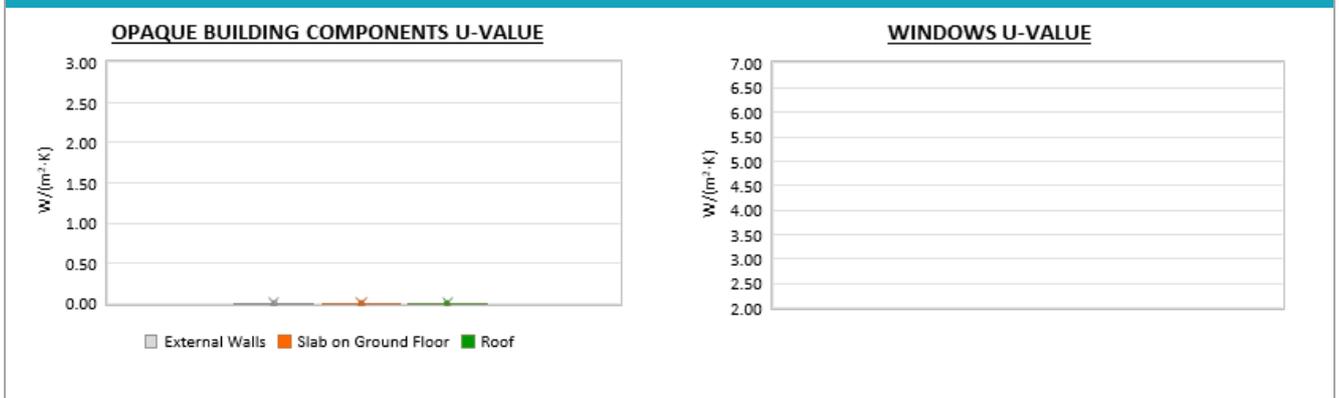
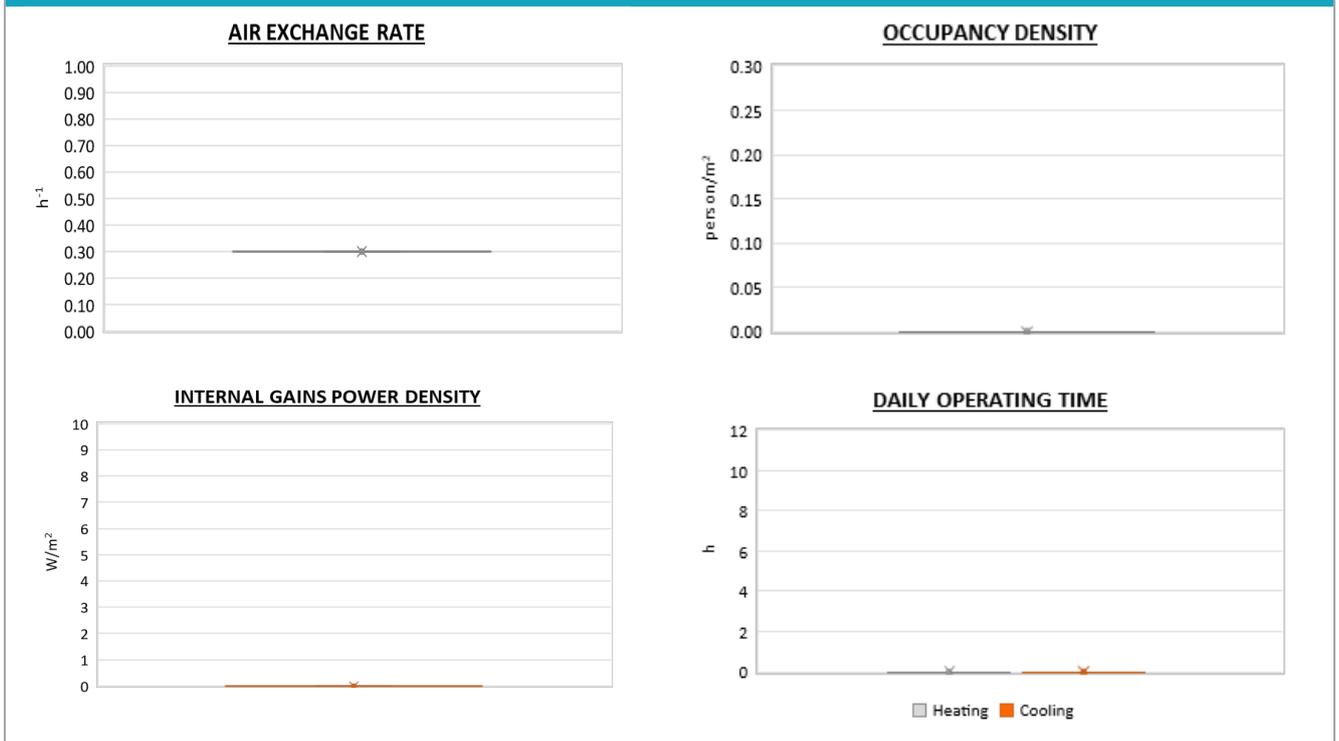
* These values were not available in the considered sources, and are thus derived from UNI EN Standards



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

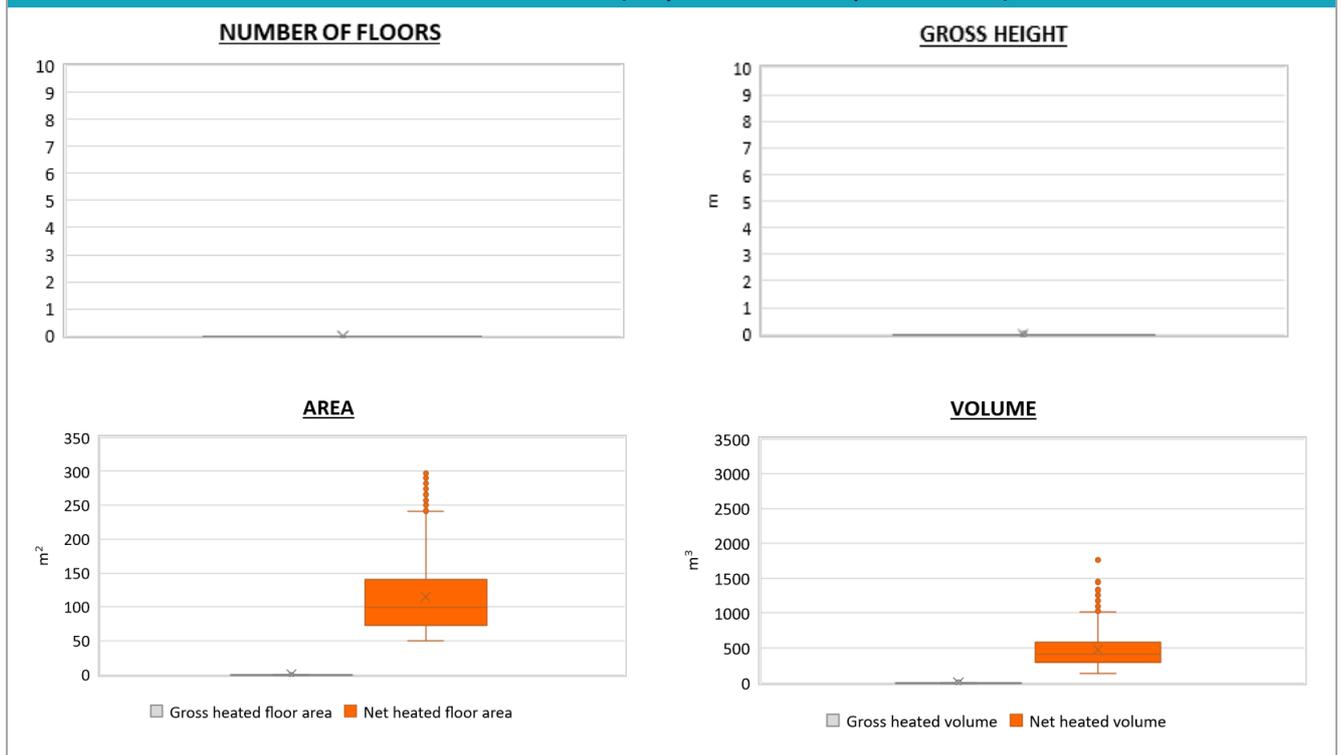
Numerical variables – ENVELOPE

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)
GEOMETRY: apartments	Inter-storey height	H_n	m	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	115	55	73	99	140
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m ³	469	300	291	403	583
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	30	28	20	25	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	11	10	6	8	13
	Temperature of DHW	ϑ_W	°C	40	-	40	40	40
	DHW system power	$P_{W,gen}$	kW	30	34	20	25	30

Additional data: GEOMETRY (the plots refer to the apartment scale)



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