

Region:		Trentino					Archetype code: EDUC_ -1930_F_TN	
Building category:		Educational						
Period of construction:		<1930						
Climatic zone:		F	Number of records:		41			
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	988	797	552	784	1204
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m ³	4770	4122	2786	3719	5530
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.49	0.13	0.41	0.44	0.54
	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	$U_{\text{fl,up}}$	W/(m ² ·K)	-	-	-	-	-
	External walls type	-						
	U-value of the wall	U_{wl}	W/(m ² ·K)	-	-	-	-	-
	Slab on ground floor type	-						
	U-value of the floor	$U_{\text{fl,lw}}$	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	UNI EN 16798-1				
THERMAL SYSTEMS	Heating system type	Centralized: 63%; Autonomous: 20%, Unknown: 17%						
	Heating generator	Boiler (unknown type): 85%; Unknown: 7%; Heat exchanger of district heating/cooling: 5%; Fireplace: 3%						
	Daily operating time of the heating system *	t_H	h	No limitation				
	Energy carrier	Natural gas 62%; Gas oil: 23%; District heating: 5%; Solid biomass: 5%; Electricity from PV, wind turbines, hydraulic turbines: 3%; LPG: 2%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 100%						
	Daily operating time of the cooling system *	t_C	h	No limitation				
	Cooling emission sub-system	-						
	DHW system type	Centralized – coupled with heating: 36%; Autonomous – coupled with heating: 27%; Unknown: 15%; Autonomous, detached from heating: 12%; District heating: 10%						
	DHW generator	Natural gas boiler: 72%; Electric Heat Pump: 12%; Unknown: 12%; Electric boiler: 4%						
* These values were not available in the considered sources, and are thus derived from UNI EN Standards								

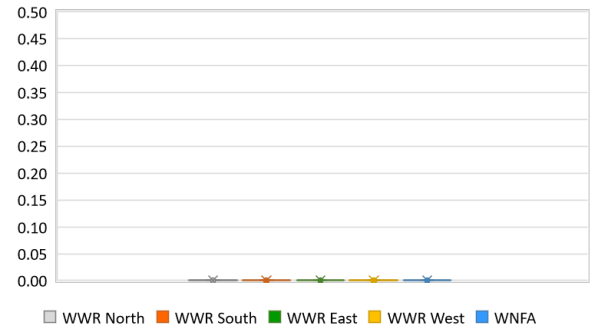
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Numerical variables – GEOMETRY

COMPACTNESS RATIO

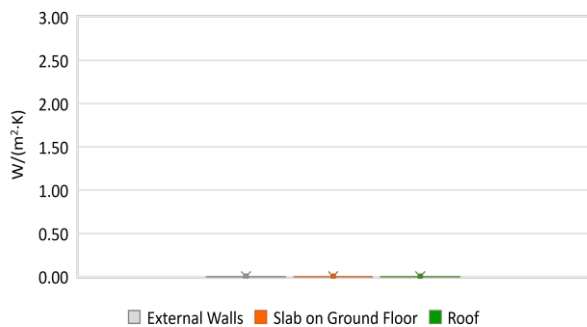


WINDOWS TO WALL RATIO

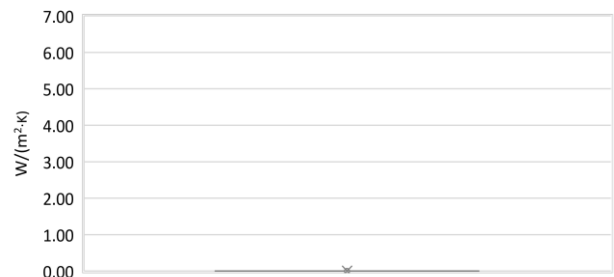


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE

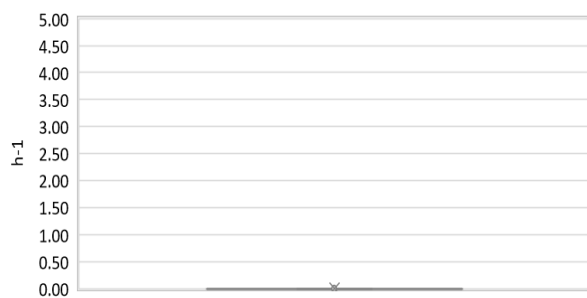


WINDOWS U-VALUE



Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

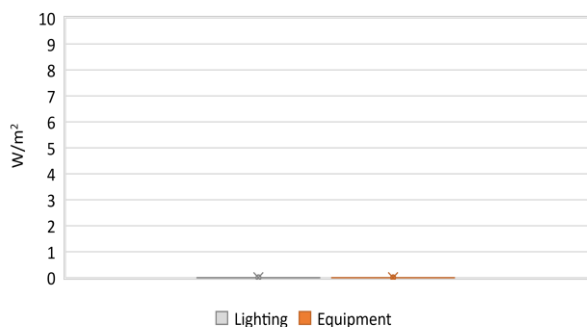
AIR EXCHANGE RATE



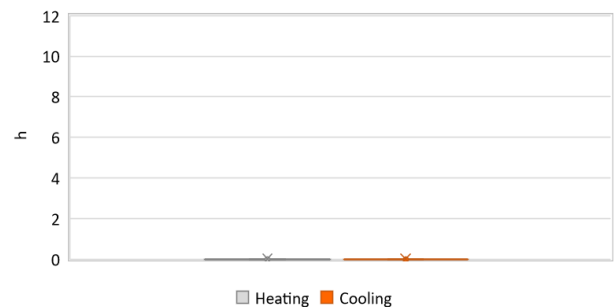
OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



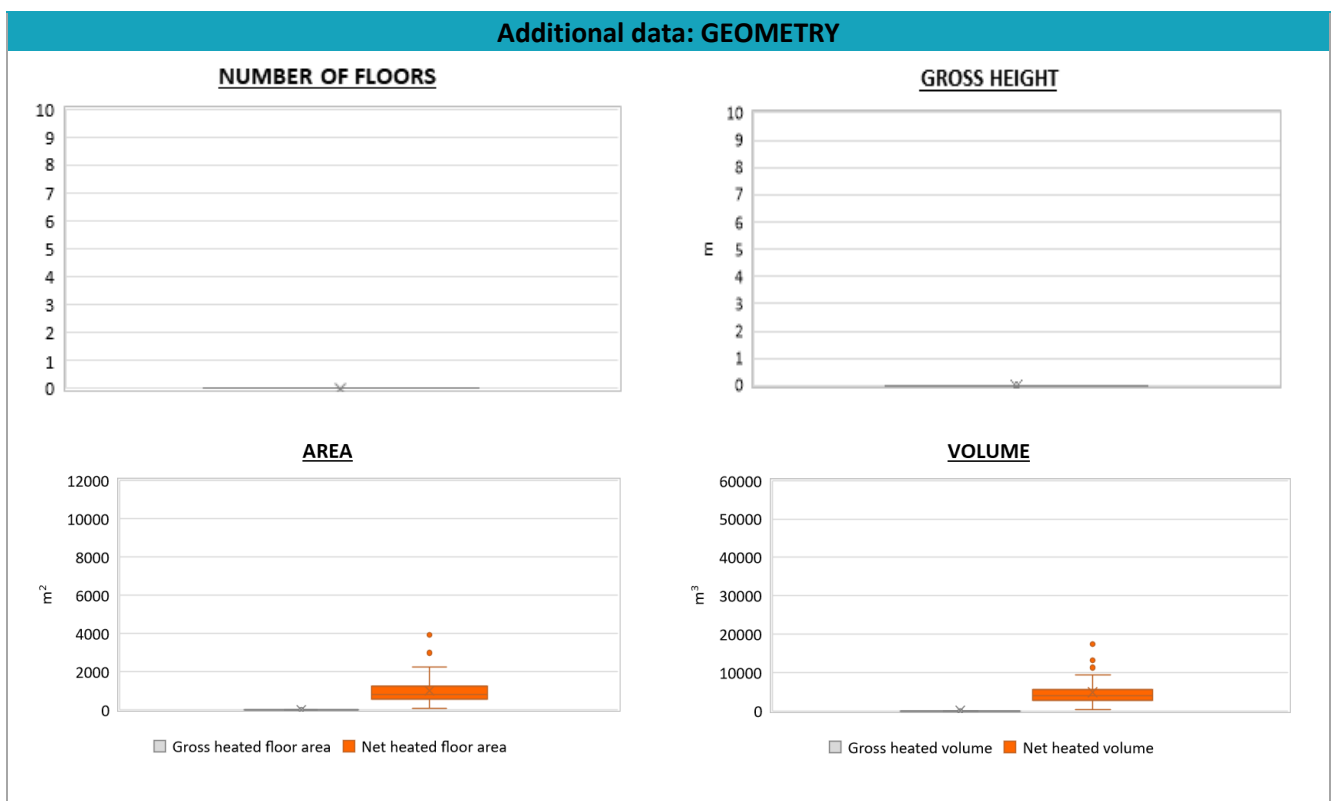
DAILY OPERATING TIME



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.

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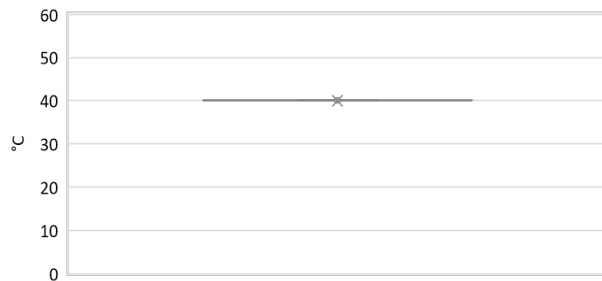
ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
THERMAL SYSTEMS	Heating efficiency or <i>COP</i>	$\eta_{H,gen}$ or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power *	$P_{H,gen}$	kW	166	148	82	127	198
	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	-	-	-	-	-
	Temperature of DHW	ϑ_w	°C	40	-	40	40	40
	DHW system power *	$P_{W,gen}$	kW	143	160	64	91	172



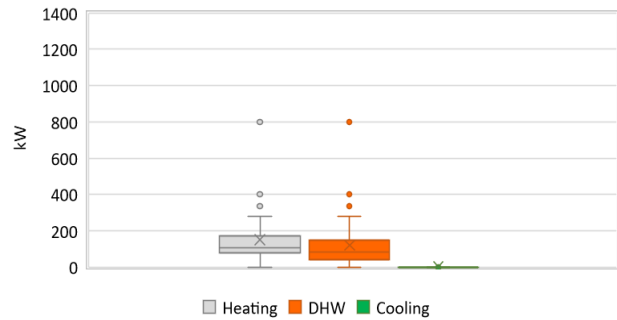
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Additional data: other numerical variables that are not included in the archetype

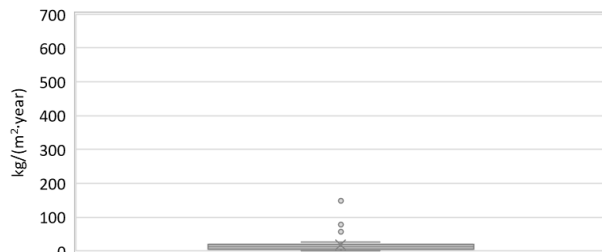
DHW SUPPLY TEMPERATURE



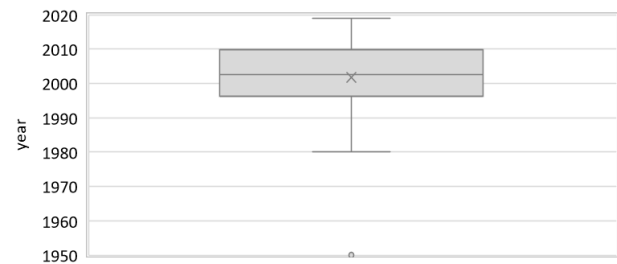
SYSTEM POWER



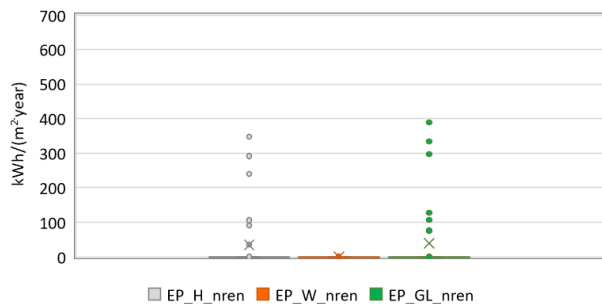
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

