

Region:		Trentino					Archetype code: EDUC_ 1941-1950_F_TN	
Building category:		Educational						
Period of construction:		1941-1950						
Climatic zone:		F	Number of records:		20			
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	835	602	503	699	1038
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m ³	3685	2579	2223	3058	4307
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.49	0.14	0.41	0.45	0.55
	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		$U_{fl,up}$	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		$U_{fl,lw}$	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: 40%; Autonomous: 30%; Unknown 30%						
	Heating generator	Boiler (unknown type): 100%						
	Daily operating time of the heating system *	t_H	h	No limitation				
	Energy carrier	Gas oil: 55%; Natural gas 45%						
	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: 40%; Autonomous - detached from heating: 30%; Autonomous – coupled with heating: 25%; Unknown: 5%						
	DHW generator	Natural gas boiler: 65%; Electric boiler: 20%; Electric Heat Pump: 10%; Unknown 5%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

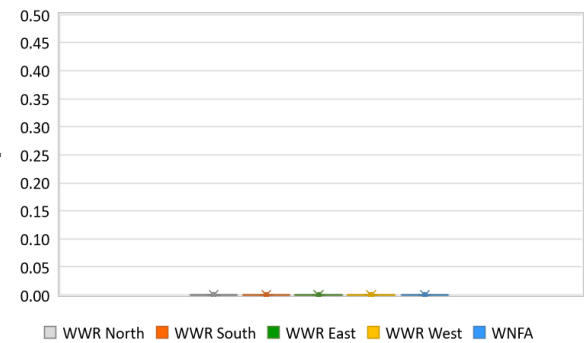
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Numerical variables – GEOMETRY

COMPACTNESS RATIO

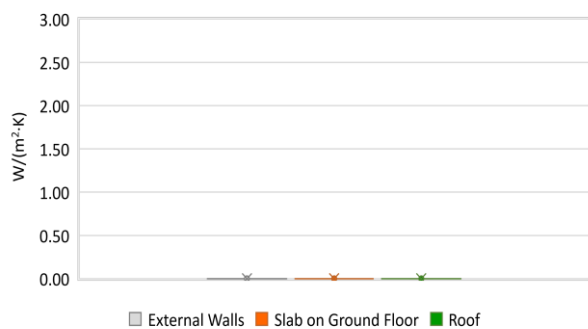


WINDOWS TO WALL RATIO



Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE

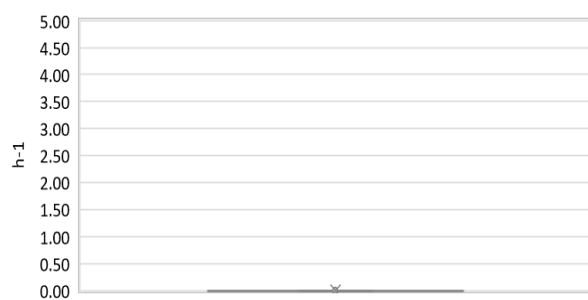


WINDOWS U-VALUE

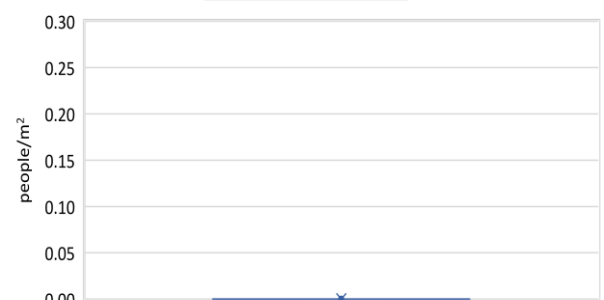


Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

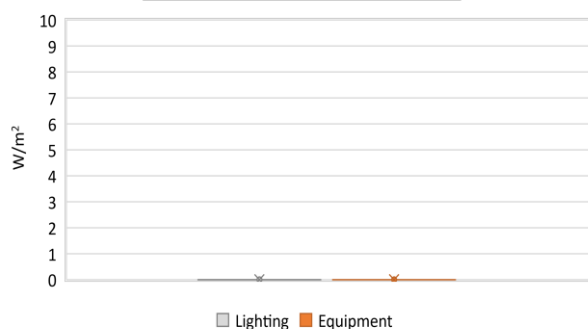
AIR EXCHANGE RATE



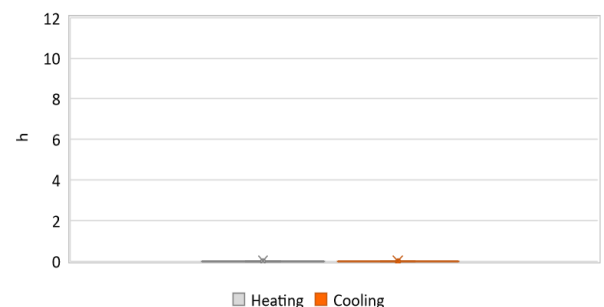
OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY

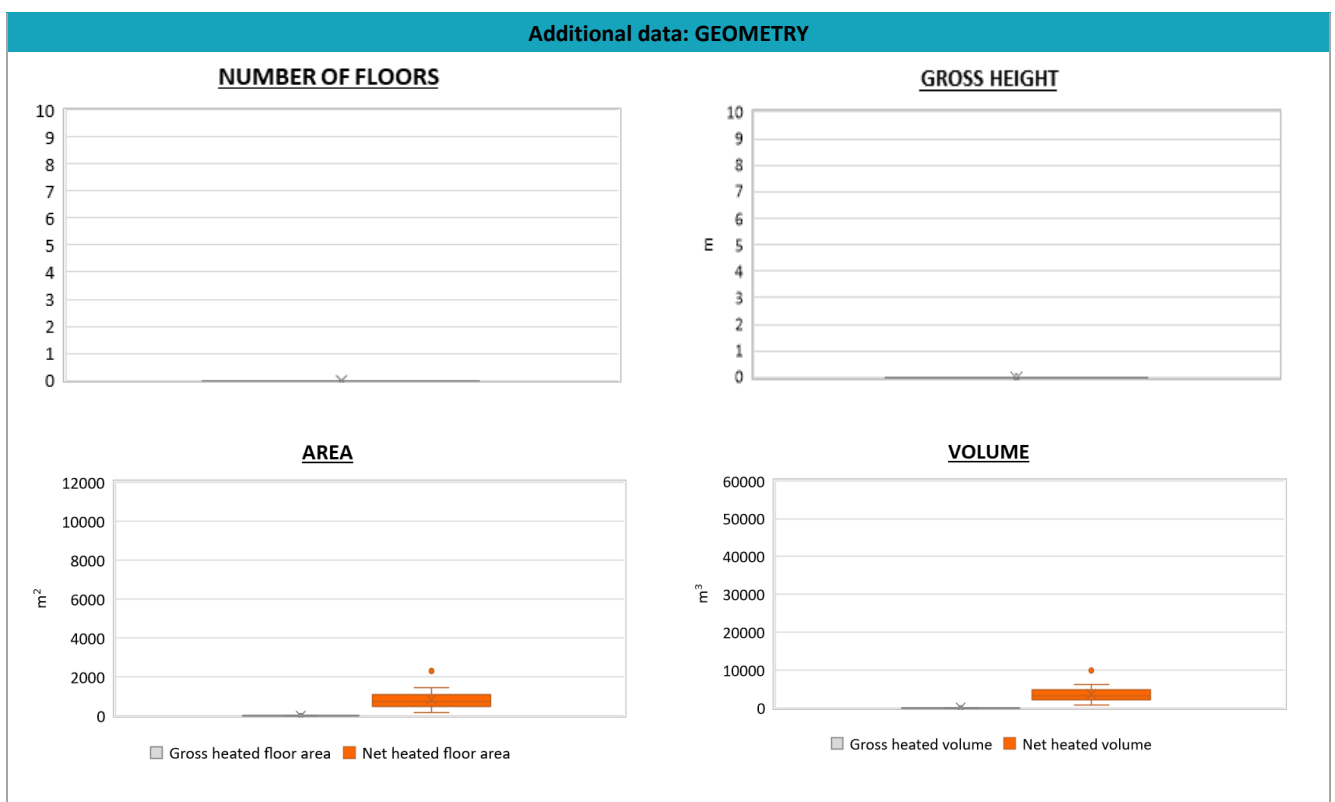


DAILY OPERATING TIME



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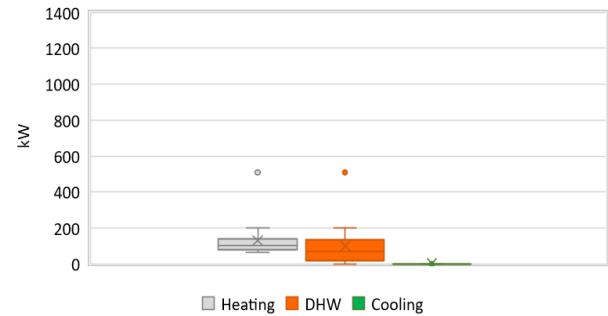
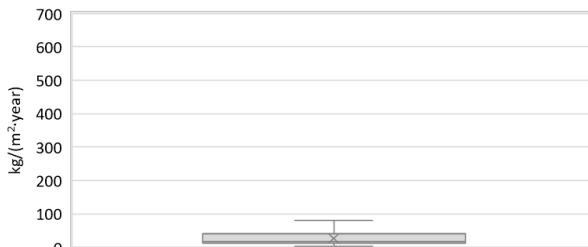
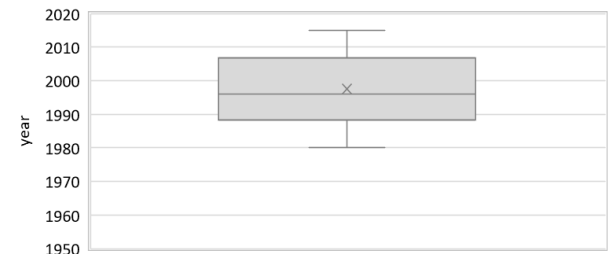
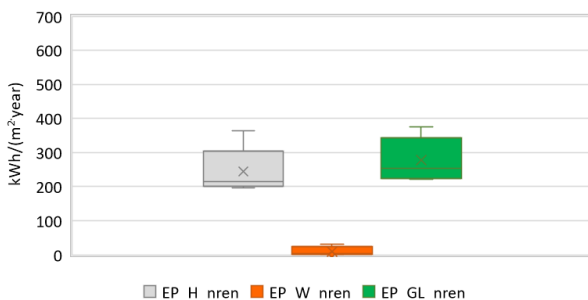
ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
THERMAL SYSTEMS	Heating efficiency or <i>COP</i>	$\eta_{H,gen}$ or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power *	$P_{H,gen}$	kW	129	99	77	101	140
	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	104	115	43	70	137



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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
