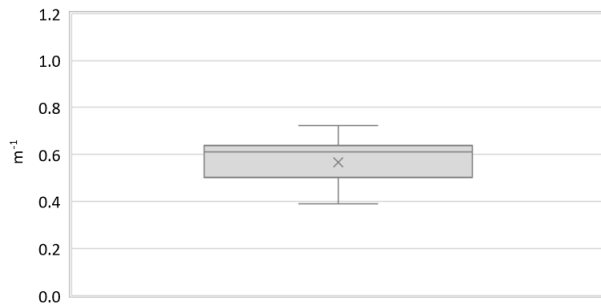


Region:	Trentino Alto Adige						Archetype code: RES_APPBLOCK_1981-1990_E_TN	
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	1981-1990							
Climatic zone:	E	Number of records:		2341				
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: no data available Roof slabs: no data available							Data sources: APE (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	1273	762	531	1055	1981
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m ³	4396	2978	1669	3436	7062
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.57	0.09	0.50	0.61	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_{wl}	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	0.30	-	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Autonomous: 38%, Centralized: 32%, Unknown: 30%						
	Heating generator	Boiler (unknown type): 70%, Traditional boiler: 14%; DHC: 9%, Condensing boiler: 6%, Air source heat pump: 1%						
	Daily operating time of the heating system *	t_H	h	14	-	14	14	14
	Energy carrier	Natural gas: 96%, District heating: 1%, Gas Oil: 1%, Electricity from PV, wind turbines, hydraulic turbines: 1%, Solid biomass: 1%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 98%, Air-cooled chiller: 2%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Autonomous – coupled with heating: 42%, Centralized – coupled with heating: 30%, Unknown: 19%, District heating: 7%, Autonomous - detached from heating: 2%						
	DHW generator	Natural gas boiler: 77%, Unknown: 20%, Electric heat pump: 2%, Electric boiler: 1%						
* These values were not available in the considered sources, and are thus derived from UNI EN Standards								

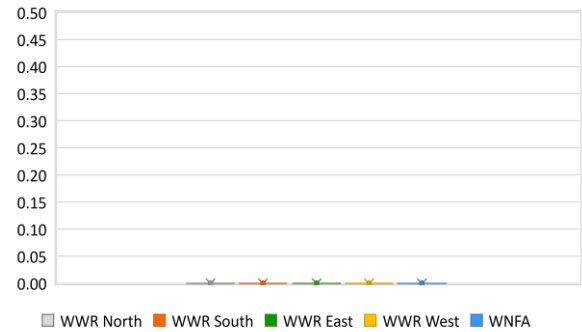
Region:	Trentino Alto Adige			Archetype code: RES_APPBLOCK_1981- 1990_E_TN
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1981-1990			
Climatic zone:	E	Number of records:	2341	

Numerical variables – GEOMETRY

COMPACTNESS RATIO

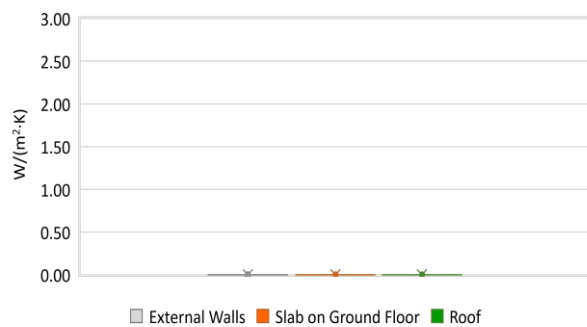


WINDOWS TO WALL RATIO

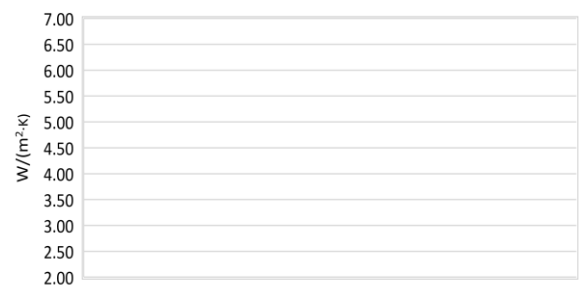


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE



Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

AIR EXCHANGE RATE



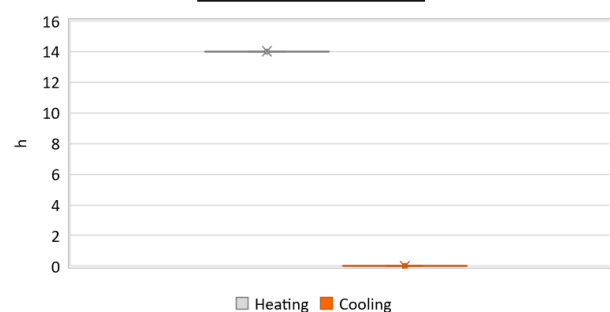
OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME



Region:	Trentino Alto Adige			Archetype code: RES_APPBLOCK_1981- 1990_E_TN
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1981-1990			
Climatic zone:	E	Number of records:	2341	

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	82	26	65	78	94
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m ³	308	128	243	288	346
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	81	100	24	29	108
	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	10	24	3	4	6
	Temperature of DHW	ϑ_W	°C	40	-	40	40	40
	DHW system power *	$P_{W,gen}$	kW	80	100	24	28	108

* These values refer to the apartment scale

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



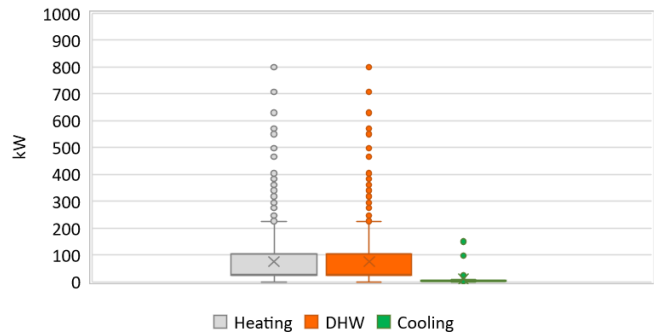
Region:	Trentino Alto Adige	Archetype code: RES_APPBLOCK_1981- 1990_E_TN
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	1981-1990	
Climatic zone:	E	
Number of records:		2341

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

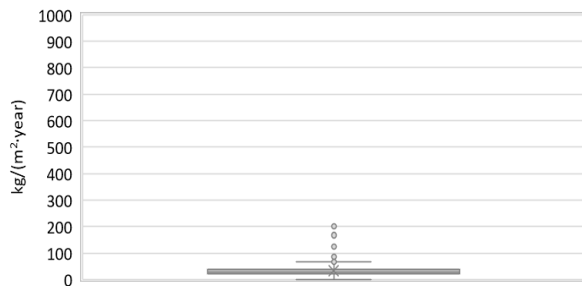
DHW SUPPLY TEMPERATURE



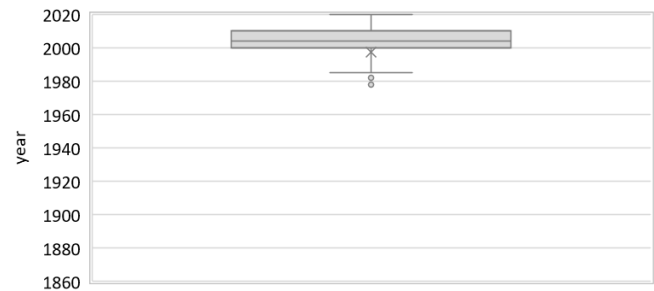
SYSTEM POWER



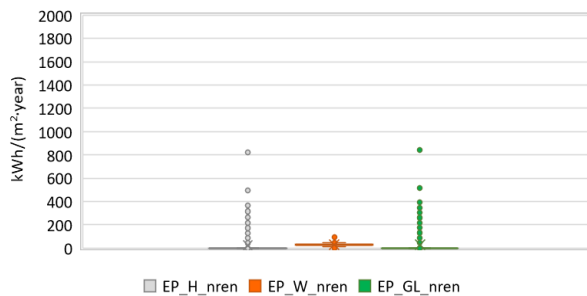
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

